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THE BUILDER

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REGISTRATION AND BUILDING

SEEKING an explanation of the comparative lack of progress in the completion of houses, Mr. Aneurin Bevan has in turn blamed local authorities for letting too many tenders and issuing too many licences for non-housing work, the building employers for bad organisation and administration, the building operatives for slackness, the shortage of materials, the black market and, by implication, the Ministry of Works for registering too many contractors.

Sir Thomas Bennett and others of his judgment have given their support to the theory that the removal of control over entry into the industry has reduced the rate of house completion and contributed largely to the black market in building. What are the facts of the case? Why was registration introduced? Why was control removed?

When the Ministry of Works was formed in October, 1940, the Government war-building programme was entirely out of step with reality, there was no information as to the availability of labour and materials in the country. Nor was there real knowledge of the structure of the building and civil engineering industries.

Steps were taken to bring the Government building programme into order and to eliminate the starting of unessential work; a first effort was made to co-ordinate and direct the building industry. Then it was made illegal for anyone to act as a building employer without having a Certificate of Registration from the Minister of Works. There was no qualification demanded for the granting of such a certificate. Anyone calling himself a builder received one on application.

The intent of this regulation was simply to discover the total number of builders in the country and to ensure that those builders complied with the terms and conditions of employment of operatives agreed within the industry or by arbitration. At that time the total number of master builders in the country could only be guessed. In 1930 it was about 50,000, of whom 75 to 80 per cent. employed less than 10 men. The Ministry, in the words of its Director-General, was "faced with an industry of which it knew very little and which knows very little about itself."

Regulation 56AB also gave the Ministry power to call for returns from all employers of building operatives, and such returns have been called for at quarterly intervals. Little has been published by the Ministry about the statistics that have been compiled from the returns. It was stated, however, that at July, 1941, there were 55,881 registered contractors employing 977,881 operatives, an average of 17 operatives per firm. To-day, under very different conditions admittedly, it is known that there are 165,331 firms employing 1,020,000 operatives, an average of six operatives per firm. It is further known that since May 31, 1945, 81,250 certificates of registration have been granted. How many of these certificates are in suspension or have been given up is not known, however. Nor has the Ministry stated how many have been revoked.

As for the operatives, it would appear from the following figures, based on the October housing returns, that some 77,000 insured operatives are "lost."

Total of workers aged 16 and under 64 insured in the building and civil engineering industry at October 25, 1946		1,020,000
Total engaged on all forms of housing	618,900	
Total engaged on other forms of repair and on new construction	324,100	943,000
Operatives unaccounted for		77,000

It is clear that, to the extent to which non-essential building is taking place to-day, attention must be focused first on the newly-registered builders (many of whom, it is fair to assume, were either operatives themselves before 1939 or else picked up some constructional knowledge during the war), and on these "lost" 77,000 operatives, who may well be working for them, probably on small repairs and decoration to houses, though in view of the £10 limit it would not be fair to assume that any particular proportion is engaged in illegal building.

The next likely source of leakage is in older established but small builders who do not engage in new housing work but draw upon the labour force of 324,000 quoted above. It is this type of firm to which Sir Thomas Bennett referred at the B.I.N.C. Congress "as only employed efficiently and to great advantage if it is left to carry out its own type of work. . . . Although it is the custom to say that the small licence job which this firm does is diverting attention and labour from housing, I do not believe that anything of the kind happens on a large scale."

A third source of leakage of materials, if not always labour, is the habit of many operatives to engage in small repairs and decorations in their free time; the aggregate time spent may be considerable, but the work is not likely to be unduly expensive in materials.

We are, therefore, thrown back primarily on an examination of the activities of the newly-registered builder and to consider what steps should be taken to control his activities. The argument that has been put forward is that had applicants for Certificates of Registration been sifted and had only those with a prior right (by previous experience of special qualification) been admitted to the industry, there would have been less black market work and a greater rate of completion of houses started. Control was removed from entry into the industry as a result of an understanding given to Parliament in July, 1944, that, when the total operative force reached 75 per cent. of the pre-war labour force, any applicant would be granted a certificate. This was a commendable desire on the part of the Government to remove all restrictions at the earliest possible moment, and the decision was reached at a time when it appeared that labour would be the bottleneck to the National Building Programme.

Experience has proved that the shifting bottleneck is, in fact, one or another of the basic materials or of the many components required before a building can be completed and, in some cases, occupied. It was not foreseen that this would be the case until the control over entry had been removed—indeed, the pundits had been stating publicly that only one thing was sure about the post-war

building programme, and that was that there would be no shortage of bricks. Within a year we were being warned, and rightly warned, that without great efforts there would be a brick famine.

The labour force was undoubtedly built up far quicker than had been expected. Those who preceded the present planners of materials production were not broad enough in their vision. They relied too much on bad building weather at the crucial stages of this year. Now that we seem to be out of the brick difficulty, we are faced with other materials shortages and with the preference scheme for distribution of all scarce materials and components to priority work. This scheme is claimed by all concerned with its operation to be a success. If it is as great a success as claimed, how do the black marketeers obtain the materials and components with which to work? Small quantities of electrical fittings, paint and distemper, the £1 a month supply of timber and other similar "free" materials are available through normal channels. In some instances there is a surplus of production above that requisitioned by W.B.A. symbols. But these sources are surely insufficient to keep an army of 50,000 black market operatives (stated by officials to be working in London alone) hard at their illegal work?

Lack of progress on housing is due to the spreading of the labour force of 618,900 too thinly over the sites on which work has started, and Mr. Bevan must accept some at least of the blame for this, for no contracts are let by local authorities without approval from his Department. Only during the last few months have local authorities been given any real guidance as to the ceilings within which they must issue licences. Some of the new builders may be bad administrators, but few of them are engaged on house construction. Some of the operatives may be slackers, but usually their slackness is the result of delays in the delivery of materials and components, and does not adversely affect the rate of completion of the houses they are constructing.

Now that the materials position is improving and greater efforts have been made to relate the number of licences issued to the available labour force it seems clear that the only positive step that can be taken in an attempt to improve the position is to stop the flow of operatives into the waste pipe line formed of the newly-registered contractors with no previous experience as master men. We are forced to the conclusion that unless Government and industry produce a scheme for the qualitative registration of contractors, even at the expense of requiring all the 165,331 firms now registered to pass an examination with revocation of certificates held by those who fail to pass, the National Building Programme will be still further delayed.

NOTES AND NEWS

Royal Academy School: New Plans.

THE Royal Academy Architecture School for so many years under the direction of the late Charles de Gruchy but closed since 1940, is to reopen next month as a day school in which the training will be designed as a final course of one year for ten selected students who have taken a degree in architecture at one of the Universities of Great Britain, Ireland or the Empire. The main purpose of the course will be an intensive study of civic architecture, and Professor A. E. Richardson, R.A., F.R.I.B.A., Royal Gold Medallist-elect, will have the direction of the Architecture School.

Parliament-square Extension.

A SOLUTION seems to be imminent of the problems arising out of the proposal to add the Westminster House site to Parliament-square as an open space in perpetuity. In 1935 the Middlesex County Council bought the freehold of this site, which lies at the corner of Great George-street, for £375,000, in order to prevent the erection of a commercial building there. Towards the cost of recouping the Council and of carrying out the contemplated road improvement, estimated together at £400,000, £290,000 had been promised from various sources, leaving £110,000 yet to be found. It is now expected that the Government, the L.C.C. and the Middlesex C.C. will increase their contributions and that thus the cost of the whole project seems to be in view.

Old Masters versus New . . . !

ROUND about this time of the year a vision of the Royal Academy Architectural Room begins to loom up in front of many architects and a few architectural perspective artists. The Royal Academy tradition has so many enemies that it is rather surprising that the show goes on at all, but it does, and with surprising vigour, bearing in mind its age. The Architectural Room, in the last few years, has shown a commendably wider choice of designs and perspective technique. A fair criticism could be levelled, however, not so much at the Academy as at the architects who always submit their work executed by the same perspective artist. This is partly a safety measure, the artists having grown to know their foibles, and partly because the artist is probably very good at his job.

But as the R.A. is one of the best forms of advertisement for architectural draughtsmen, and many young artists are keen to exhibit there, it does rather seem a pity that the greater proportion of the wall space is covered by the work of the accepted "few." How can a young aspirant get past the guarded portals? With no work of his own to illustrate, the only way seems to be for him to get in touch with the select band of architects who always exhibit, and ask them point blank to give him a chance, in preference to Mr. ——. This, besides being rather unprofessional, probably would not work, as Mr. —— is almost sure to be a sort of accepted "annual event." Another method is to advertise, but people are rather chary of artists who advertise ("he can't get enough work by his merits").

An *impasse*? Almost. The only way out seems to be for the young aspirant to perspective fame to be content with small commissions, and to improve his technique, so that when his chance does come, and it will sooner or later, his obvious talent will be immediately recognised. It must be remembered that the "old masters" of the Architectural Room did not have it all their own way to start off with, but once established they found their position almost invulnerable, partly because of the conservatism of the older school of British architects, but mainly because they were brilliant at their job.

Big Stuff.

AN American friend, visiting England for the first time, was like so many others struck by the tremendous possibilities here for building and rebuilding. To him it seemed that there had been nothing like it in any country since the great building boom in the States half a century ago. And what a boom that was. One has only to turn through the pages of some of the books published on the work of such firms as McKim, Mead and White, and Cram, Goodhue and Ferguson to realise that probably never before in history had architecture been organised on such a terrific scale as it was when the American cities were beginning to rise in their hundreds. Jobs, one or two of which would have satisfied many English architects for a lifetime, were designed and carried out to completion in record time. There was surprisingly little standardisation in those days, and draughtsmen had to be completely competent designers in the classical tradition to cope with the work.

Perhaps we should take heart from the example set by these extraordinarily versa-

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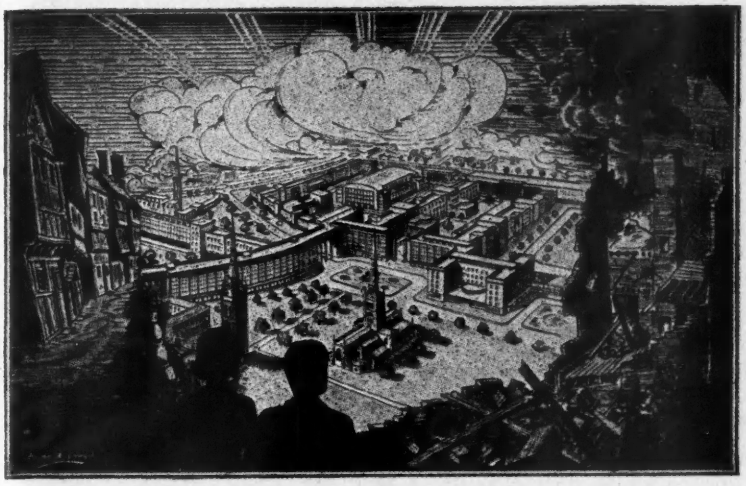


THE NEW COVENTRY.—An artist's impression of the new Coventry rising from the ashes of the old, which the President of the Institution of Municipal and County Engineers, Mr. E. H. Ford, O.B.E., City Engineer of Coventry, is using as a Christmas card. The drawing is by Mr. Bryan R. Connell, planning officer of Coventry.

tile American architects when we feel, as perhaps some of us tend to feel, that the job ahead of us is almost too big. They worked as teams then, as we should now, and our teams should certainly have been organised by now. How to choose their captain is not so easy; many well-known names have been suggested, but unfortunately some well-known names become well known not always by virtue of work achieved. That there are many brilliant "unknowns" is obvious, and the one way of pulling them to the fore is by the organising of large preliminary competitions for the work to be done.

New Town in Cheshire Abandoned.

THE Minister of Town and Country Planning, Mr. Lewis Silkin, M.P., informed representatives of local authorities from the North-West of England, on December 6, that as a consequence of a report received by him from Dr. R. C. B. Jones, the noted geologist, of Wigan, it would be ill-advised to build the proposed new town at Mobberley and Knutsford in Cheshire. Dr. Jones reported serious subsidence in the whole area. The Minister said he had been impressed by the criticisms of the original proposal to build a new town at Mobberley made at a previous meeting with the same local authorities, and he had accordingly amended his plan to include Knutsford, thus taking the new town farther from the built-up area of Manchester. The urgent Manchester housing problem and the urgent problem of dealing with the Manchester overspill made it essential that now that the Knutsford-Mobberley scheme appeared to be ruled out, no time should be lost in considering alternative sites in co-operation with the local authorities. One or more new towns would no doubt be required, as well as the expansion of existing towns. Meanwhile borings would be carried out to ascertain the extent of the Cheshire subsidence area, in co-operation with the local authorities concerned.

City of Exeter.

THE Minister of Town and Country Planning (Mr. Lewis Silkin) has made an Order under Section 1 of the Town and Country Planning Act, 1944, declaring an area of approximately 75 acres in the war-damaged centre of the city of Exeter to be subject to compulsory purchase for the purpose of redevelopment.

War Damage and the Architect.

THE Architects' Registration Council state that they have received complaints of professional misconduct arising in connection with the desire of the War Damage Commission that all war-damaged property in the same street should be grouped under one architect and one builder. Some architects have mistakenly assumed in consequence that they were justified in asking owners of property by whom they had not been commissioned to appoint them as architects for the purpose of their war damage claim. It is unprofessional and contrary to the Code of Conduct for an architect to solicit business, and in order to assist those architects who may be in doubt as to the proper course to pursue, the following has been drafted to indicate the proper method of approach in such cases :—

"Dear Sir,—I have been appointed architect by Mr. ..... of ..... Road, ... in respect of his war-damage claim.

The War Damage Commission desire that as far as possible the repair of war damage to several houses in the same street shall be undertaken by one architect and one builder. In these circumstances I shall be much obliged if you will let me have the name of your architect, if any, and if not, perhaps you will be good enough to let me know what arrangements you are making for the repair of your property.—Yours faithfully,

....."

COMING EVENTS

Friday, December 20.

INSTITUTE OF TRANSPORT. Annual General Meeting of Corporate Members. Institution of Electrical Engineers, Savoy-street, W.C.2. 6 p.m

Thursday, January 9.

INSTITUTION OF STRUCTURAL ENGINEERS. Professor R. H. Evans, D.Sc., Ph.D., M.I.C.E., on "Extensibility and Modulus of Rupture of Concrete." 11, Upper Belgrave-street, London, S.W.1. 6 p.m.

Monday, January 13.

INCORPORATED ASSOCIATION OF ARCHITECTS' AND SURVEYORS' EXHIBITION. "Science Applied to Modern Building Construction." Caxton Hall, Westminster. 10 a.m. to 7 p.m. daily until January 18.

Tuesday, January 14.

THE INSTITUTION OF ELECTRICAL ENGINEERS, SCOTTISH CENTRE. Mr. W. Fennell on "Fundamental Legislation for Electricity Supply to Consumers." Royal Technical College, George-street, Glasgow. 6.15 p.m.

Thursday, January 23.

INSTITUTION OF STRUCTURAL ENGINEERS. Mr. E. H. Neward, B.Sc., on "The Stress Grading of Timber and Its Influence on Structural Design." 11, Upper Belgrave-street, S.W.1. 6 p.m.

Gold Medallist.

THE Baker Gold Medal has been awarded by the Institution of Civil Engineers to Mr. G. L. Groves, B.Sc., M.I.C.E., in recognition of his services in connection with the Ilford Tube.

British Architects for Sweden.

NEXT year no fewer than 1,400 British architects, town planning specialists and other persons interested in housing and planning are expected to visit Sweden under the auspices of the British Housing and Town Planning Organisation. The idea is to hire a whole passenger vessel for their use, and to visit Norway and Finland as well.

Timber for Building Joinery.

THE Ministry of Works announces that the severe shortage of softwood has made it impossible to release further float stocks of softwood to enable builders' joiners to buy timber in anticipation of orders for housing joinery. No further application for this purpose can, therefore, be considered. Licences granted in the third quarter of 1946 and not used cannot be renewed.

Municipal Appointments.

MR. FRANK MELLOR, F.R.I.B.A., Architect to Middlesbrough Education Committee, is to resign at the end of this month to take up a new post as Borough Architect of Widnes.

MR. A. GOLDING, A.R.I.B.A., Chief Architectural Assistant at West Hartlepool, has been appointed Borough Architect of the town.

An Appointment.

MAJOR G. S. BROWN, A.R.I.B.A., of Troon, Ayrshire, has been appointed to the Colonial service as an architect in the Public Works Department, Hong Kong.

Professional Announcements.

MR. SYDNEY J. SQUIRE, M.I.Struct.E., L.R.I.B.A., F.I.A.A., chartered architect and structural engineer, has commenced practice at 89, Oaks-avenue, Worcester Park, Surrey (telephone Der. 3283), and would be glad to receive trade catalogues, etc.

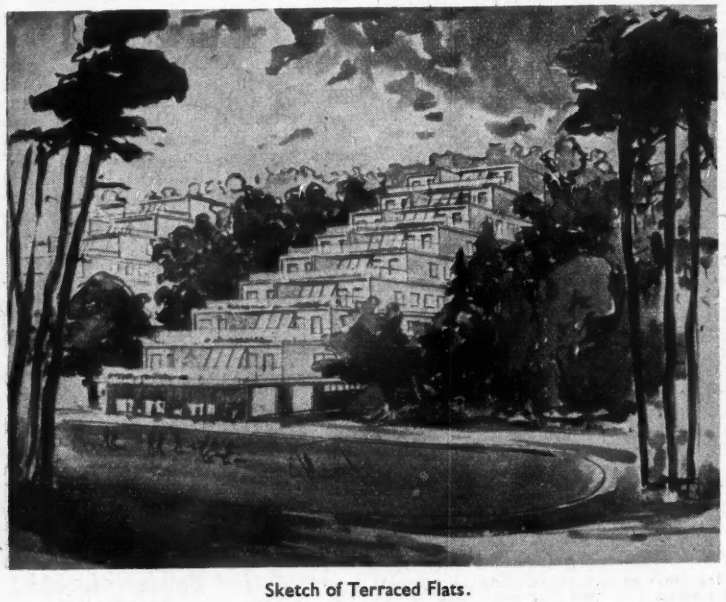
MR. F. E. OLNEY, M.Sc.(Tech), has resigned his appointment as Head of the Building Department at Willesden Technical College, Denzil-road, Willesden, N.W.10. His place will be taken by MR. N. KEEP, F.R.I.B.A., who will be pleased to receive trade literature and samples for reference purposes in the Senior Building Courses at the Willesden Technical College.

From *The Builder* of 1846

Saturday, December 19, 1846.

NO ROYAL ROAD FOR PAINTERS. A Captain Berkeley, of Exeter, advertised that he had made a valuable discovery in the art of painting, and offered to teach it for 300*l*., and so enable any one in half a year to earn a fortune! A gentleman named Eamondson sent his son to him, paid 150*l*. and gave him a bill for 150*l*. more. The son soon found that the thing was useless, and left his instructor. The bill was not taken up, and an action was brought by Captain Berkeley, in consequence, which was decided last week in the Court of Queen's Bench. Artists showed that what the pupil had learnt was useless, and must be unlearnt; and that by the means professed, though a strong painting to please the vulgar might be produced, a good picture could not. The jury immediately gave a verdict for the defendant.

Model-Photo of a New Residential Area.



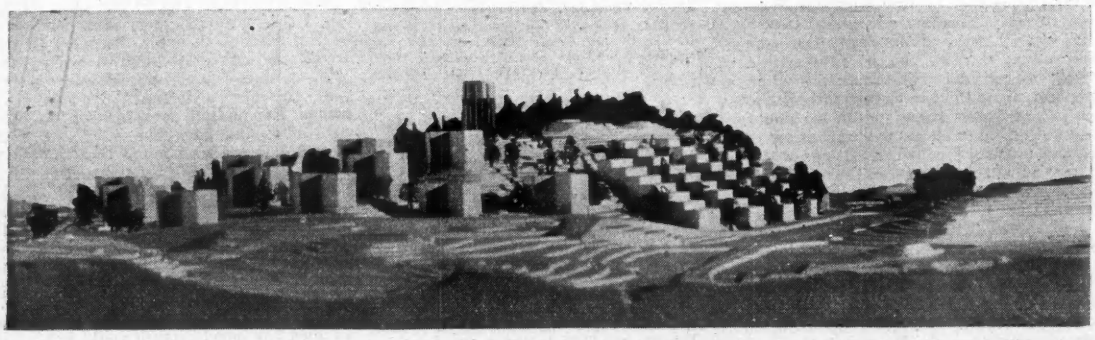
Sketch of Terraced Flats.

TERRACED FLATS in a new RESIDENTIAL AREA near STOCKHOLM

SUNE LINDSTRÖM, ARCHITECT

THE PLAN FOR THE DEVELOPMENT of Saltsjöbaden, referred to in a recent article,* was prepared last year in substitution for a scheme of detached one-family houses which had been begun earlier. The redistribution of house-building in more concentrated areas, as now proposed, is considered to give better results as regards density, at the same time allowing more room for public and open spaces and for the preservation of natural features in the landscape.

* *The Builder*, November 8, 1946.



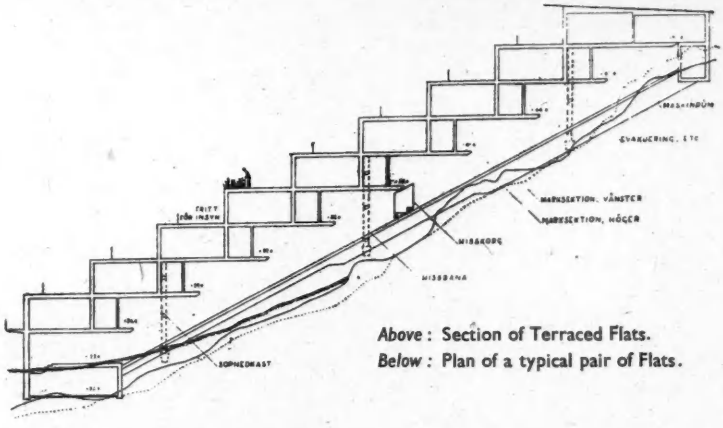
Another View of the Model.

The plan provides for three types of houses in continuous rows on land suitable for the cultivation of gardens, a group of three-storey buildings described as "star houses," each consisting of nine flats, and eight terraced buildings stepped up a rocky hill slope near the southern edge of the estate.

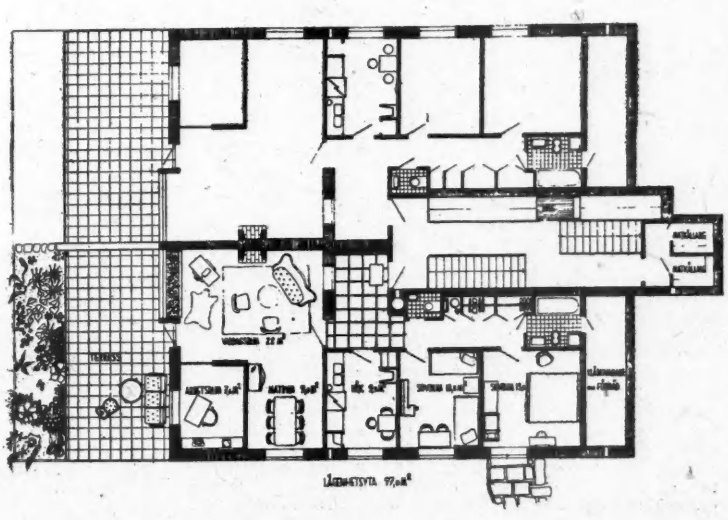
These terraced buildings are so arranged that each stage is set back about 19 ft. from the one below it. In this way it is possible to form a spacious terrace extending the full width of the flats, most valuable in itself and essential to the scheme as a whole. Each terrace is planned as a paved sitting-out space which might almost be regarded as an open-air extension of the living-room. Along the edge of it is a railing and strip of garden. The angle of vision is calculated to prevent overlooking and ensure seclusion.

The flats are reached by a specially designed lift on wheels, which runs up a sloping track with stopping place at each landing, or by stairs running parallel to it. One of the rooms in each flat also has a door leading directly to the hillside, so that it would be almost equally correct to describe these dwellings as houses as it would be to call them flats.

Sketch of a Living-room Interior.



Above: Section of Terraced Flats.
Below: Plan of a typical pair of Flats.



Each flat is composed of the same basic elements. At the front are the living-rooms—a large sitting-room facing approximately south, a smaller room connected with it for use as a workroom or study, and a dining recess capable of being partitioned off if desired. Most of the outer wall of the sitting-room is taken up by a large splayed window (in which indoor plants can be grown). The feeling of openness and space imparted by its generous proportions is well conveyed in the sketch reproduced above, which shows the interior of a living-room with a glimpse of the terrace and of the unobstructed view beyond.

Next to the dining recess comes the kitchen, and beyond it, leading out of the entrance hall, a corridor giving access to the bedrooms, lavatory, bathroom, wardrobes and stores.

It is the bedroom wing that varies in plan, its length and the number of rooms contained in it being determined by the irregular contours of the rocky ground. A definite advantage is gained by making the flats fit into the site in this way, for the result is a natural variation in size, which is of considerable value in connection with letting.

F. T. WINTER.

TERRACED FLATS
in a new
RESIDENTIAL AREA
NEAR STOCKHOLM
SUNE LINDSTRÖM, ARCHITECT

E

CORRESPONDENCE

[Whilst we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

The International Reunion of Architects.

To the Editor of *The Builder*.

Sir,—Will you grant me some of your valuable space to put before your readers the results of the first international conference of architects held since the war, which took place in London from September 23 to 28 this year. The conference took place at the invitation of the British Committee of the International Reunion of Architects. It had a two-fold aim : firstly, to deal with the routine business of the I.R.A., and, secondly, to explore the possibilities of transforming the International Reunion into a wider and more representative body which could speak for the architects of the world.

Both these aims have been fulfilled. The main items of routine business were the decision to hold the next full congress in a year's time, possibly in Switzerland, and to elect a new president in the person of Sir Patrick Abercrombie. The second aim was fulfilled in unanimously deciding to wind-up the old I.R.A. and to lay the foundations of an International Union of Architects. A Working Committee was appointed to define the aims and to draw up the statutes of this organisation, which is to consist of two parts :—

1. An international assembly of architects, delegates of the participating countries, which is to elect a president and hon. secretary and an executive committee.

2. A permanent bureau under a full-time secretary to deal with such matters as :—

Administration.—(a) Conferences and congresses; (b) international competitions; (c) standards of professional qualifications; (d) co-ordination of foreign visits, exchange of students, teachers and practising architects.

Information Services.—(a) Library and exchange of information, including bibliographical material, digests, bulletins and translations; (b) arrangements for publications and the reproduction of illustrations, exhibition material and its distribution.

Contact with other organisations.—(Federation of Housing and Town Planning, etc.).

This Working Committee consists of M. van den Broek, M. Burckhardt, Mr. Goldfinger, Professor Holford, M. Krejcar, M. William Olsson, M. Vago.

It was agreed that the Executive Committee should consist of representatives of Belgium, France, Great Britain, Poland, Portugal, Sweden and Switzerland, three places on the committee being reserved for the Latin-American countries, the U.S.A. and the U.S.S.R.

May I add that the success of the Conference was largely due to the double patronage of the R.I.B.A. and of the British Council? The R.I.B.A. offered hospitality to the Conference proper in putting at its disposal its council chamber and its committee rooms for a full week, and also by helping to a very large extent in the finances of the Conference. The British Council not only extended its hospitality for two weeks to all the foreign delegates, but also organised, in a most competent way, tours, visits and travel by rail, river and air.

E. Goldfinger, Hon. Secretary,
International Reunion of
Architects (British Committee).
London, W.1.

Taking Off Quantities.

To the Editor of *The Builder*.

Sir,—Referring to your report (December 6 issue) on the recent Chartered Quantity Surveyors' meeting at which discussion took place on Mr. Walford's paper on the principles of taking off quantities by the Trade-by-Trade system, it appears that the customary prejudices were vented against this system, the advocacy of which, indeed, never fails to divide the quantity surveying camp. Why should this be so?

The desideratum of a standard method of measurement does not necessarily imply a standard system of taking off quantities. The present writer's opinion is that a fully trained quantity surveyor will be adept at both methods, because each has its own advantages for particular classes of work.

One misconception that frequently crops up from the "Noes" is that in working by the Trade-by-Trade system one has religiously to take-off item by item, seriatim, in the order of final billing. By no means is this so. The practised exponent of this system will interleave his taking-off sheets as and when required and he will anticipate to suit his book. It is all a matter of (1) mental flexibility, which the quantity surveyor should by training have acquired, and (2) the proper kind of paper, which he can buy.

There is much empiric pointing to proneness to error in one or other system according to the side taken. There are, indeed, pitfalls and to spare in both systems for the novice to sink into up to the neck. But surely the art of the quantity surveyor lies in the ability to sift and pigeonhole his thoughts and regulate his thinking processes to whatever channels suit his purpose best, so that he may master the difficulties of the job of measurement that faces him; the dyed-in-the-wool adherent to one system or the other is self-confessedly a man with limitations.

There are many jobs that I would never consider taking-off on the Trades system; there are others (for example, a series or group of similar buildings to the same specification) that it would be sheer donkey work to embark upon by the other system. Put in another way, it is a question of picking the right tool—which is sometimes mistakenly thought to be genius.

It remains to say that any system that is likely to relieve the congestion that faces the quantity surveying profession, and that shortens the office-time factor, should merit close consideration.

Exeter. Stanley Hookway, F.S.I.

Architect Prosecuted for Exceeding the Amount of Licence.

To the Editor of *The Builder*.

Sir,—As a result of a recent prosecution and conviction of an architect for exceeding the amount of a building licence, a very serious position has been created for the profession as a whole.

Without going into full details of the case, the magistrates' decision that he had exceeded the licence was based on the amount that the contractor had paid for wages and materials, even though the value of the work done as certified by two quantity surveyors was considerably less than the builder's costs.

The result of this decision is that any architect who is supervising work for which a licence has been granted will be compelled, in his own interests, to check the amount of money being spent by the contractor, irrespective of whether he has a priced schedule or not, almost from day to day, during the whole time the job is proceeding, otherwise he renders himself liable to be prosecuted for exceeding the licence even though he has no actual control of the expenditure.

As this is a matter which should be brought to the notice of anyone who is responsible for building under the present regulations, I should be obliged if you would publish this letter.

Maurice Yendall, L.R.I.B.A.
106, Moorside North,
Fenham, Newcastle-upon-Tyne.

Architects and Builders as Helpers in Boys' Clubs.

To the Editor of *The Builder*.

Sir,—The very great contribution to the social services rendered by architects and by all members of the building industry is implicit in the nature of their work. It is because we believe that there is already a close link and so firm an interest that I am asking for individual help from your readers.

The boys' club movement in this country has been built up by the personal service of men who have voluntarily come into clubs to share their enthusiasms and their experience of life with working boys during their all-important leisure time. For many reasons the need for voluntary help in boys' clubs is as great to-day as ever before. The London Federation of Boys' Clubs believes that there are many who would like to spend one or two evenings each week in this work, but are deterred by the feeling that they have not the necessary ability. The Federation is, therefore, organising a part-time training course for such people, and if any of your readers would be interested to have details about this I shall be most happy to supply them. Peter Kuenstler,
Chairman, Leaders' Training
Committee.
London Federation of Boys' Clubs,
222, Blackfriars-road, S.E.1.

COMPETITION NEWS

Exhibition Stand Design.

The awards in the "Art and Industry" Industrial Design Competition No. 2 for the design of the exhibition stand for Crittall Metal Windows are as follows :—

1st : Gordon McKnight, Belfast.
2nd : John Toombe, Aldenham, Herts.
3rd : R. Stanley and H. G. Ingall, School of Architecture, Leicester.

Highly commended : Thomas Forde, Greenford, Middlesex; C. G. Pinfold, Welwyn Garden City; Edward Banks, Coulsdon, Surrey; and J. C. Amson, Liverpool.

A public exhibition of the entries will be held at the Building Centre, Conduit-street, London, W.1, opening on January 6 for one week.

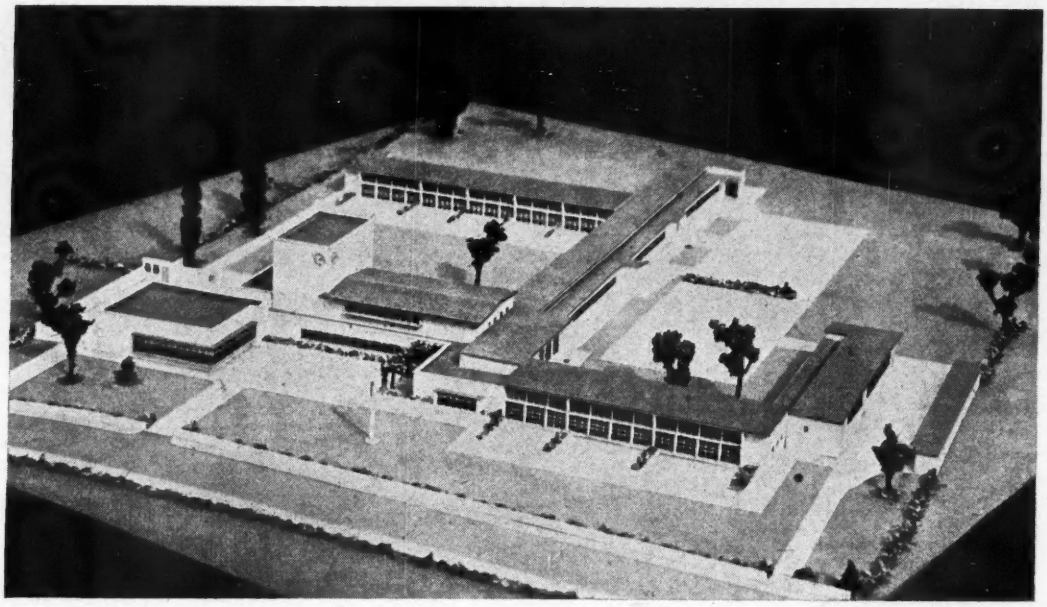
OFFICES IN REGENT STREET FOR SWEDISH AIR LINES

The Information Office for Swedish Air Lines (A.B.A.) are at 185, Regent-street, W.1, and have been designed by Mr. Gerald Lacoste, M.B.E., A.R.I.B.A. Most of the materials, including the shop front and the counter, were fabricated in Sweden by Nordiska Kompaniet, of Stockholm, and fitted and fixed by the general contractors, Messrs. Boyd Gibbins, who carried out all the work of conversion and decorating, except for the shop front, which was fixed by Messrs. Pollards. The electric lighting fittings were provided by Messrs. Troughton and Young, Ltd., and Messrs. Heffer and Co., Ltd. (fittings in booking hall). Glass and mirror work were by Messrs. W. Tabor and Son (Glass), Ltd., and paving to forecourt by Messrs. Art Pavements and Decorations, Ltd.

View looking towards Entrance. *Below*: View showing the Counter and Mural.

THE VIEWS GIVEN ABOVE OF THE INFORMATION OFFICE show the general setting, including the plaques, four in number, intended to illustrate movement by land, sea, air, and in time, based upon symbols arranged by Mr. Kenneth Dod in a formal composition. The wall map is by Mr. Ralph Lavers. Other details are on facing page. The architect is Mr. Gerald Lacoste, M.B.E., A.R.I.B.A.

INFORMATION OFFICE FOR SWEDISH AIR LINES, REGENT STREET



View of model from the South-East.

PROPOSED JUNIOR & INFANTS' SCHOOL, MAGHULL

FOR LANCASHIRE COUNTY COUNCIL

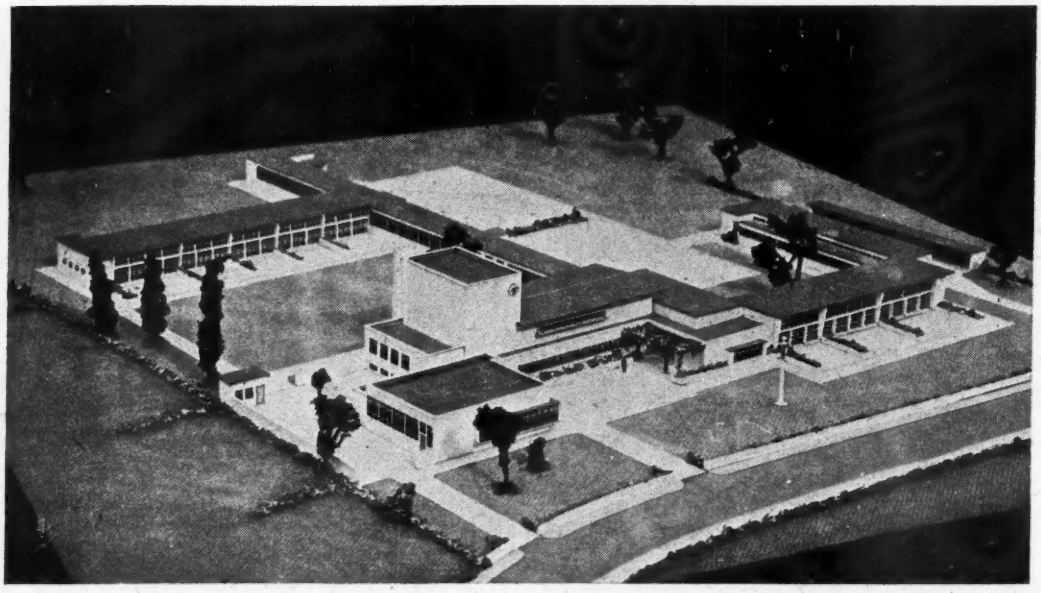
G. NOEL HILL, F.R.I.B.A., M.T.P.I., COUNTY ARCHITECT

C. H. SIMMONS, A.R.I.B.A., ASSISTANT COUNTY ARCHITECT (EDUCATION)

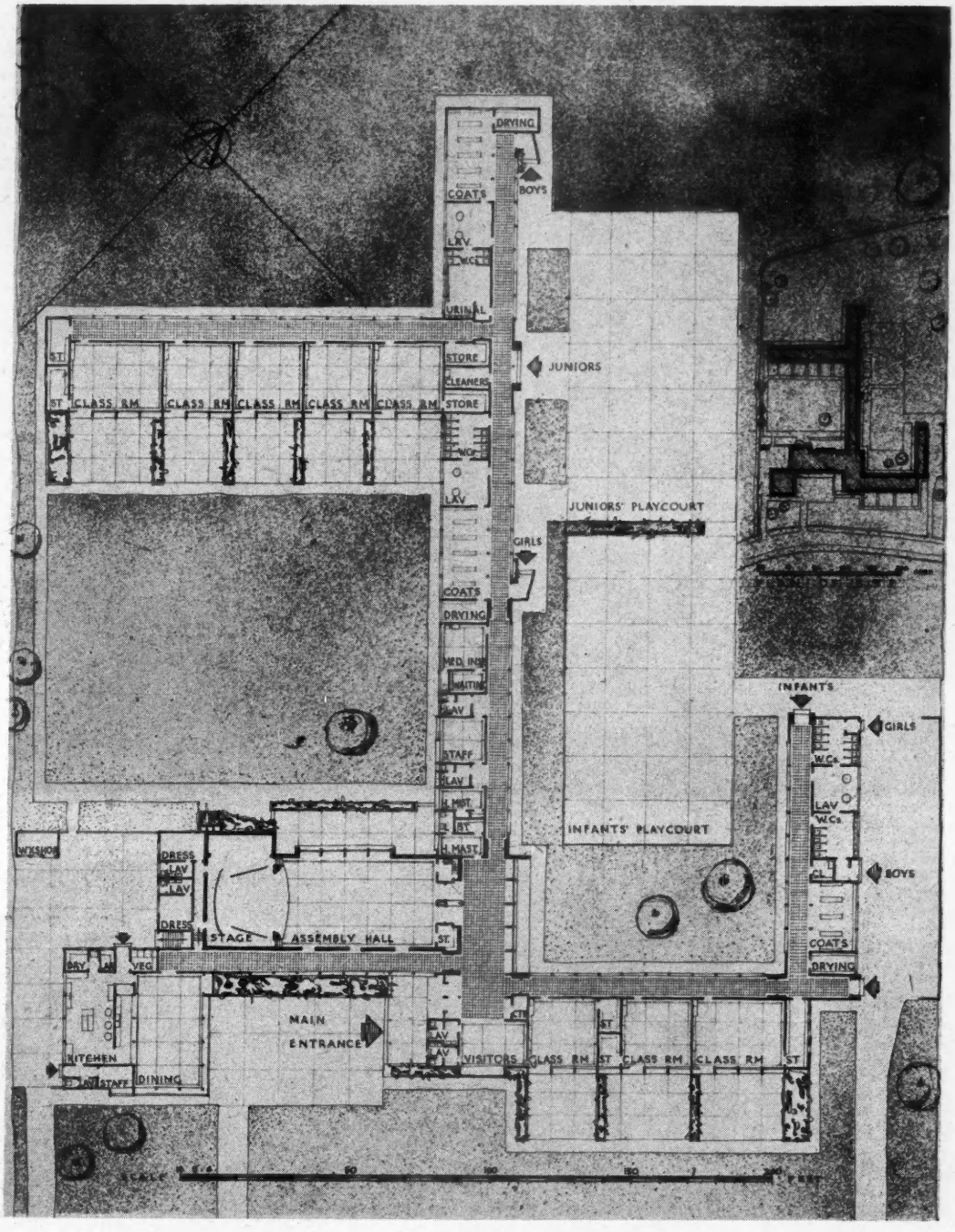
and J. G. L. GIBBS, A.R.I.B.A., SENIOR ASSISTANT ARCHITECT

DESIGNED BY THE LANCASHIRE COUNTY ARCHITECT, MR. G. Noel Hill, F.R.I.B.A., M.T.P.I., Mr. C. H. Simmons, A.R.I.B.A., Assistant County Architect (Education), and Mr. J. G. L. Gibbs, A.R.I.B.A., Senior Assistant Architect, this school will accommodate 200 juniors and 120 infants with possible extensions for both juniors and infants.

Classrooms have clerestory lighting over the corridors; the average daylight factor for these rooms is four. It is proposed that the hall, dining-room and kitchen will be used by the public in the evenings and this has influenced the plan. This unit will become a community centre and can be used separately from the remainder of the school. The hall has a generous and well-equipped stage, and the dining and kitchen facilities are in excess of the



View from the South.



The Plan.

normal requirements for a school of this size. The building will be of steel-framed construction with cavity walls, brick externally and hollow blocks internally, partitions between classrooms being of double hollow blocks with 1½ in. cavity and finished with plaster. Steel decking covered with bituminous felt is proposed for the roof covering, but provision is made for alternative roofing if this is necessary.

Ceilings will be suspended fibre-board on steel laths. Floors generally will be of asphalt, with timber in the assembly hall and rubber in the corridors and entrances. Heating will be by oil-fired boilers, the main pipe runs, which serve wall radiators, being carried in ducts under the corridors. The estimated cost of carrying out the erection of the school is £62,000.

PROPOSED JUNIOR & INFANTS' SCHOOL, MAGHULL, FOR LANCS. C.C.

G. NOEL HILL, F.R.I.B.A., M.T.P.I., COUNTY ARCHITECT

OBITUARY

E. Frazer Tomlins.

Mr. F. R. Jelley writes :—

It is very difficult to write of the passing of an old friend and colleague from whom one has learnt so much, if one lapses into the unctuous phraseology of the formal obituary notice.

Tomlins was unique. He was a master draughtsman who conveyed his ideas to master craftsmen with supreme self-confidence and no fuss. If the rules and regulations concerning building in London did not happen to fit his schemes, he always found a way round them which had not previously occurred to anybody else.

Nothing ever perplexed Tomlins. When the owner of a new house complained that one of the fireplaces smoked, Tomlins advised him to burn wood instead of coal. "I prefer the smell of wood smoke, don't you?" said he.

When somebody discovered that, in the design of a magnificent panelled board room, a steel stanchion cap had been overlooked and projected in an obtrusive manner through the plaster frieze, Tomlins comforted the distracted draughtsman by observing "Don't worry, old chap. Leave it alone, and if anybody asks what it is, tell him it's a mistake."

His range of interests was varied and subject to violent and sudden fluctuations. Sometimes he was a vegetarian and we fed on preserved ginger. Sometimes he was a revolutionary and we affected clay pipes. When he returned from a tour of Spain wearing a broad red sash with large tassels, he announced that toreadors never wore braces and called me a bourgeois person because I refused to discard mine. He bought some shares in the Southern Railway because he thought the new passenger coaches on that line were less uncomfortable than those provided by other railway companies for their patrons.

In a commercial age, Tomlins refused to be impressed or intimidated by big business. He said he was a member of an artistic profession and could not, therefore, be expected to adhere to time tables or recognise any particular hours of work. He scoffed at the apostles of standardisation, ignored progress schedules, derided card indexes and ridiculed all schemes for organising drawing offices, but he produced more good work with less effort in less time than any other architect I have ever met.

His name may be unknown to the younger generation of architects, but I am quite sure that nobody who ever worked with him or enjoyed his friendship will walk down Kingsway without recalling that gaunt figure with the sardonic laugh who has left his mark there and now gone.

Sir John Oakley, G.B.E.

Sir John Oakley, G.B.E., whose death took place on December 5, was President, in 1918, of the Royal Institution of Chartered Surveyors. Born in 1867, he was educated at Uppingham and the Royal Agricultural College, Cirencester. After serving as President, he became a member of several Royal Commissions and committees. He was knighted in 1919 and created G.B.E. in 1928.

W. H. Woodroffe, F.R.I.B.A.

The death has taken place, in his 86th year, of Mr. Walter Henry Woodroffe, F.R.I.B.A. (retired), late of 5, Bedford-row.

G. A. Lansdown, J.P., F.R.I.B.A., F.S.I.

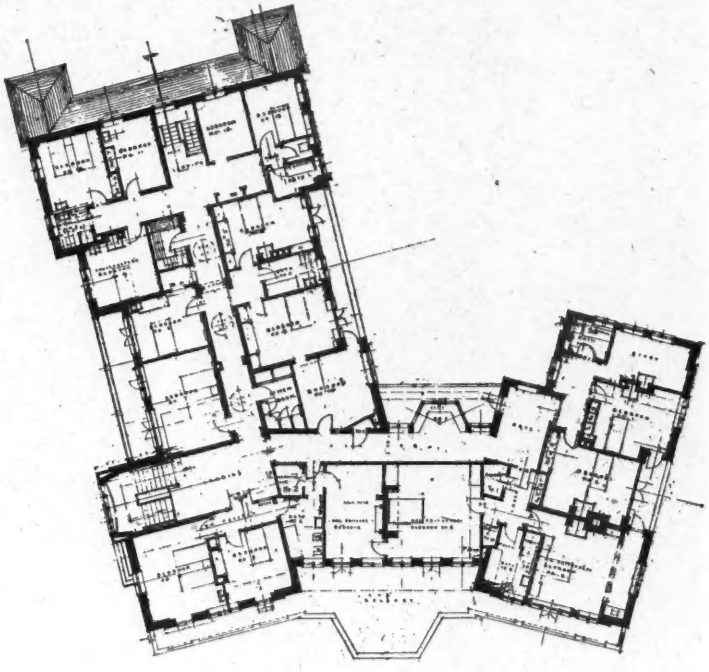
We regret to record the death of Mr. George Arthur Lansdown, which took place at his home on December 14, in his 84th year.

EDSTONE HALL, WOOTEN WAWEN, WARWICKS.

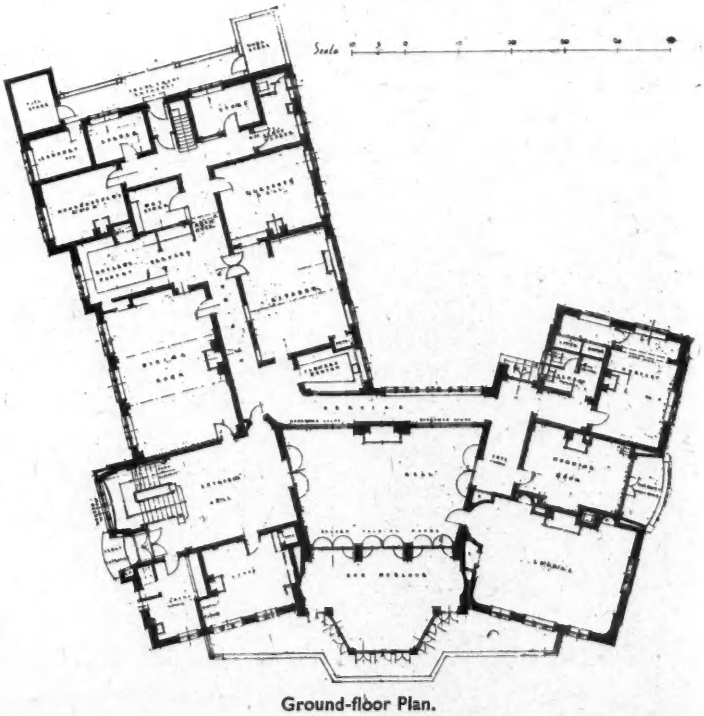
FRANCIS W. B. YORKE, F.R.I.B.A., ARCHITECT

THE NEW EDSTONE HALL IS AT least the third home to be built upon its site, and a carved stone from the first of these is built in over the garden entrance. The Manor was granted by William the Conqueror to Robert de Stadford, and King John, in his day, granted it to Godfrey Craucumbe, who later forfeited it to the Crown. The Somervilles were the owners from the time of Edward IV to the middle of the 18th century.

The old Hall, replaced by the



First-floor Plan.



Ground-floor Plan.

EDSTONE HALL, WOOTEN WAWEN, WARWICKS. The Courtyard.

present house, was of late Georgian date, and of little interest architecturally, although the cellarage—being spacious and lofty, a kind of undercroft in its way—was retained, and overlaid by a reinforced concrete raft, upon which the existing house was built. The first floor, again, is planned quite independently upon a raft (Attock blocks) supported by the ground-floor walls. The levels of the site allowed for an entrance from the rear beneath the courtyard to the heating chamber, switch rooms, etc., in the basement.

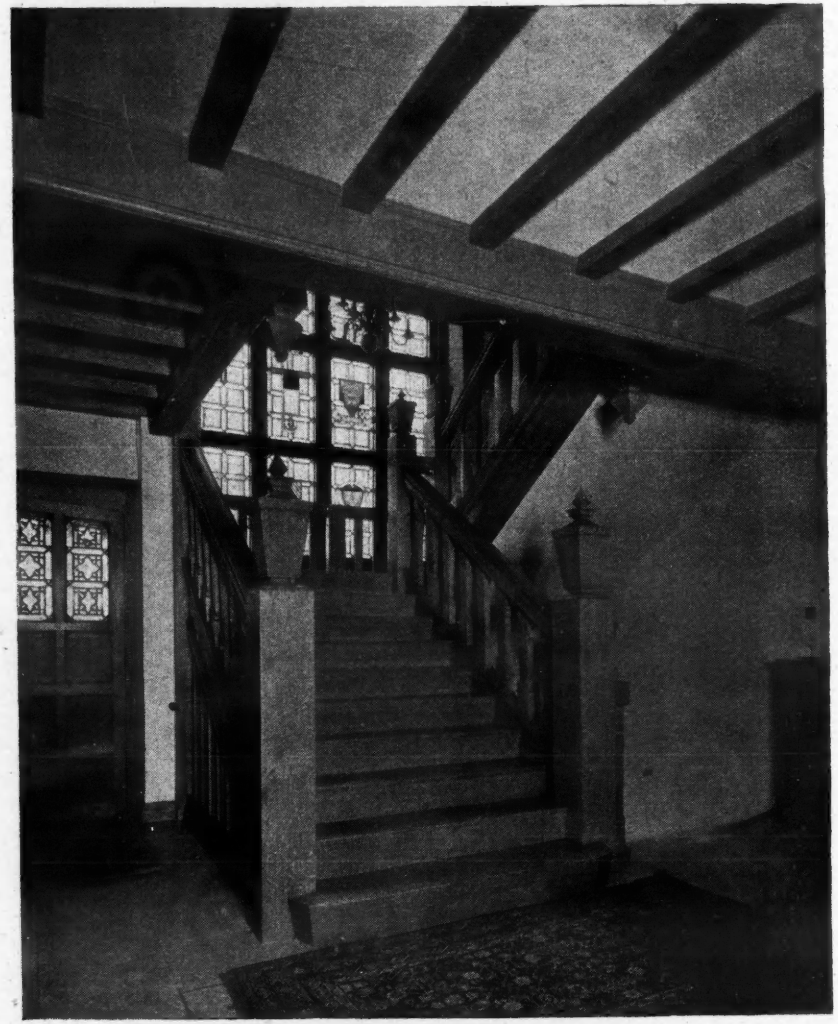
The problem was to plan a compact house of specified capacity with the easiest possible access from one part to another, and at the same time to open up every corner to light and air. The house was planned with east and west wings at obtuse angles with a communication corridor connecting the nursery to the kitchen wing, to open up as many rooms as possible to the sun. The intervening space forms a paved courtyard, a feature of which is a wrought-iron head and lantern over a stone-built base.

The principal bedrooms are arranged in "suites" with their respective bathrooms, etc., and all with access to spacious balconies. The larger wardrobes are fitted with automatic lighting, mirrored doors and nests of drawers, with cedar wood linings. The main staircase of oak is continued to the basement floor, where the billiard room is planned. A cocktail cupboard opens from the ante- to lounge-hall, and a radiogram cupboard with grille from the lounge. The woodwork generally is of oak, including ceiling beams and fittings.

The walls are of textured plaster, simply decorated and with occasional panelling. The ceilings of the principal ground-floor rooms are oak-beamed, with the exception of the morning-room, which has an ornamental ceiling. The entrance hall is paved with stone flags, and the reception rooms and first floor generally floored with oak battens. The floors of the ground floor, cloaks, corridors, lavatories and kitchen quarters, etc., are tiled, and bathrooms are paved with terrazzo. At the time of building it was found impossible to obtain sufficient Cotswold stone for the entire elevations, consequently they were built in Himley sand-faced "Cotswold" brick with flush joints and dressings of Ham Hill stone. The roofs are covered with collected old Cotswold stone tiles. The hips are close cut with secret gutters, and the ridges of St. Aldhelm's stone.

Features of the elevations are the 20-ft. wide window of the sun parlour, and the oak-framed window of the staircase, 9 ft. wide by 15 ft. high, containing stained glass bearing the arms of the various owners. This glass and the borrowed lights in the lounge-hall, illustrating the history of the Manor, were carried out by Messrs. Thomas William Camm. Other features of the exterior are the lead rainwater heads bearing various and appropriate emblems, and the cast lead sundial over the sun parlour bay. The fireplaces generally are of Clipsham stone.

The general contractors were Messrs. George Webb and Son, Ltd., of Birmingham. Sub-contractors and suppliers were: Stonework, the Ham Hill Co., Ltd.; steelwork, Chas. Wade and Co., Ltd.; hollow floors, etc., Attoc Blocks, Ltd.; Cotswold roof tiling, Freeman and Son, Stroud; steel windows and leaded lights, sliding and folding windows, lay lights, patent glazing, etc., Henry Hope and Sons, Ltd.; Cretolux lights, Haywards, Ltd.; stone paving and

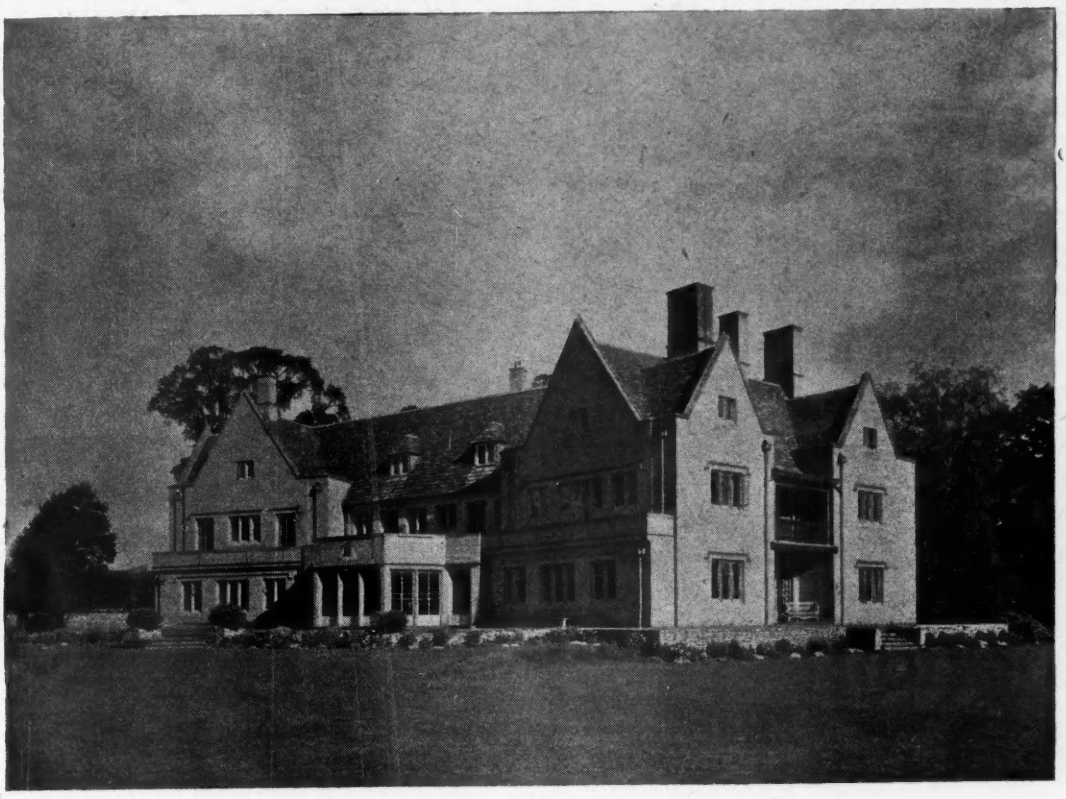


Left : The Main Staircase. *Above* : Dining Hall.

stone fireplaces, D. French and Co.; asphalt and verandah tiling, Val-de-Travers Paving Co., Ltd.; plastering, George Prince, Ltd.; plumbing and water main, David F. Wiseman and Sons; sanitary fittings, etc., William E. Farrer, Ltd.; heating and hot water, Hopes Heating, Ltd.; electrical installation, Gordon Hughes Electric Co., Ltd.; wall and terrazzo floor tiling, etc., Robertsons, Ltd.; stained glass to staircase bay and borrowed lights, Thomas William Camm; Aga cooker, Stratford-on-Avon Supplies, Ltd.; oak floors, Macdougall and Son, Ltd.; and electric light fittings, Best and Lloyd.

EDSTONE HALL, WOOTEN WAWEN, WARWICKSHIRE

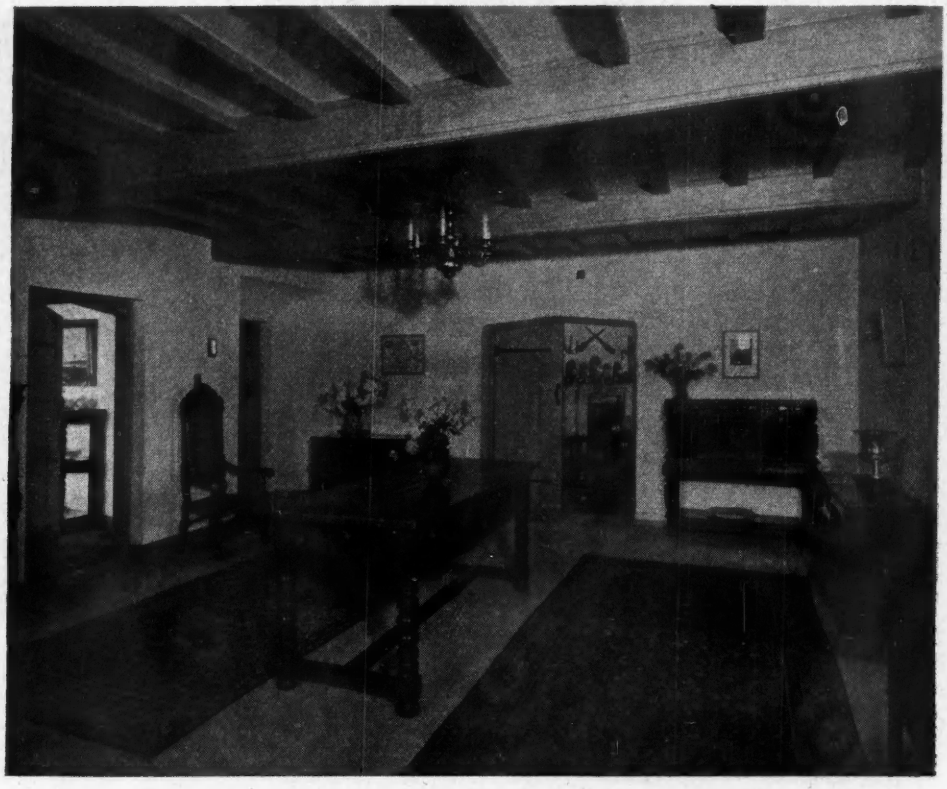
FRANCIS W. B. YORKE, F.R.I.B.A., ARCHITECT



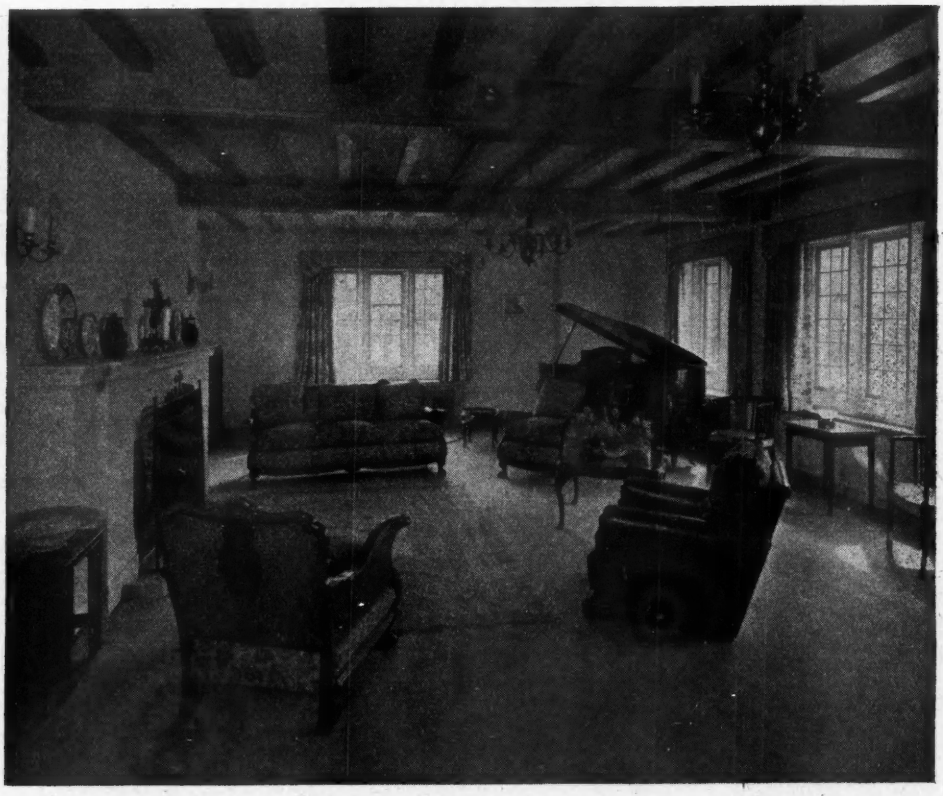
View from South.

The Entrance Front.

EDSTONE HALL, WOOTEN WAWEN, WARWICKS.

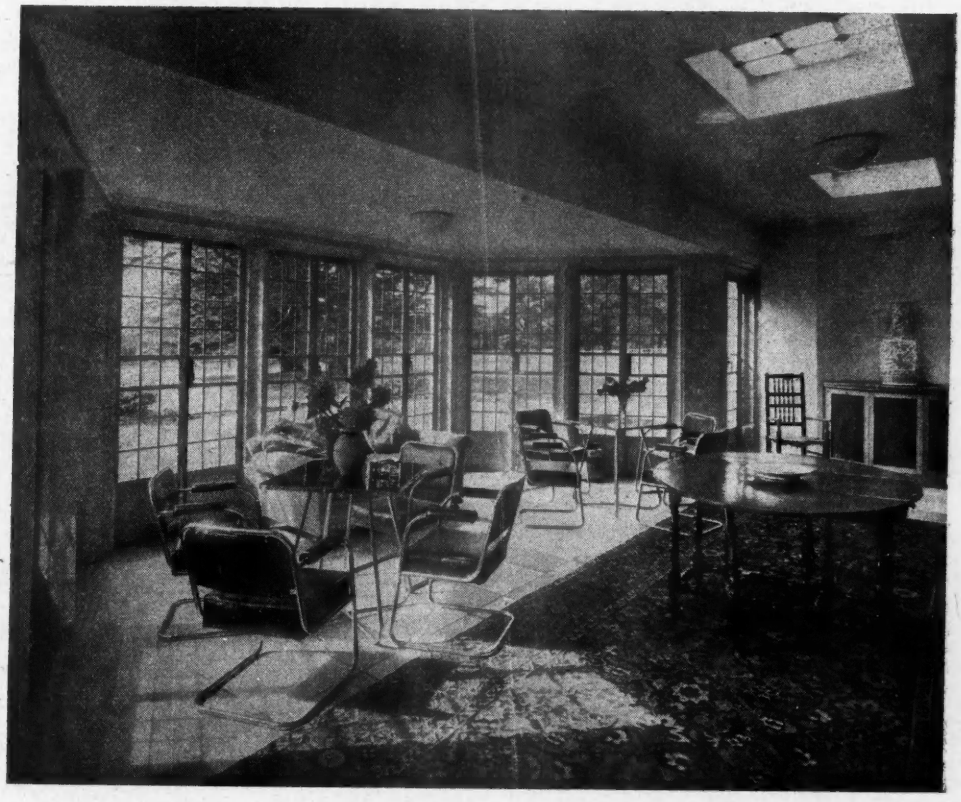


Entrance Hall.



EDSTONE HALL, WOOTEN WAWEN, WARWICKS. The Lounge.

Living Hall.



EDSTONE HALL, WOOTEN WAWEN, WARWICKS. Sun Room off Living Hall.

View of Entrance Front.

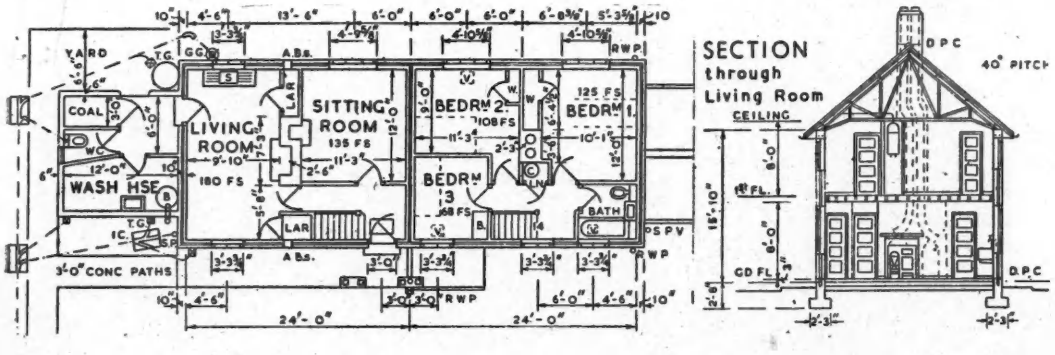
EXPERIMENTAL RURAL HOUSES, BADMINTON

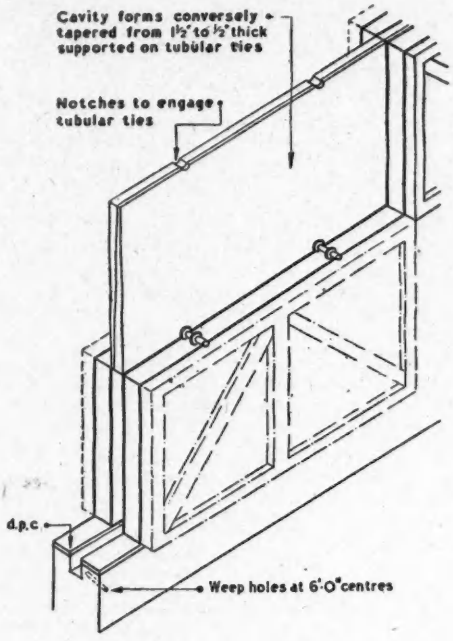
C. D. CARUS-WILSON, M.C., F.R.I.B.A., ARCHITECT

FOUR EXPERIMENTAL CONCRETE houses, for which a new type of shuttering known as the "Corvus" system was used, have recently been erected on the Duke of Beaufort's estate at Badminton, Gloucestershire. Major Nelson Rooke, F.S.I., F.L.A.S., agent to the Duke, is the inventor and patentee of the system. The houses have been built under a special Ministry of Works experimental licence and were inspected during construction by officials of the Ministry and Building Research Station. They have been favourably reported upon and pronounced suitable for erection by local authorities and eligible for loans for 60 years.

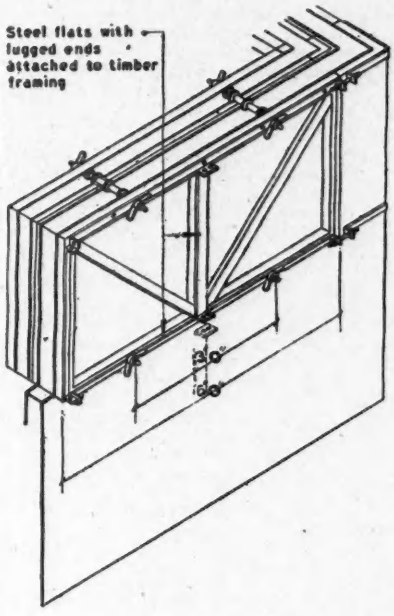
The shuttering, which was assembled on the Duke's estate, is constructed of 2-in. by 2-in. framed timber, faced with 18-gauge galvanised sheet iron and is made up in sections 6 ft. long and 3 ft. wide, each of which constitutes one lift of the concrete. In order to make handling easier, it is proposed for future work to construct the shuttering of aluminium alloy. The concrete is poured between the shuttering which has a double wedge cavity plate in the centre. The plate completely fills the cavity, thus preventing accumulation of debris — a special feature of this system of construction. Lugs fitted on top of the plates facilitate withdrawal after the concrete has set. The shuttering is held in position by tubular steel wall ties, ½ in. in diameter, which remain in the concrete. These are spaced approximately 3 ft. apart, both vertically and laterally. Circular steel lugs welded on the outside of the tubular ties are accurately spaced to maintain the outer and inner leaves of the shuttering and cavity plates in their correct positions. Bolts, which are withdrawn when the concrete has set and the shuttering struck, pass through the tubular wall ties from one side to the other, to keep the shuttering units firmly in position during pouring.

The external walls are of 10 in. total thickness and consist of 4 in. outer

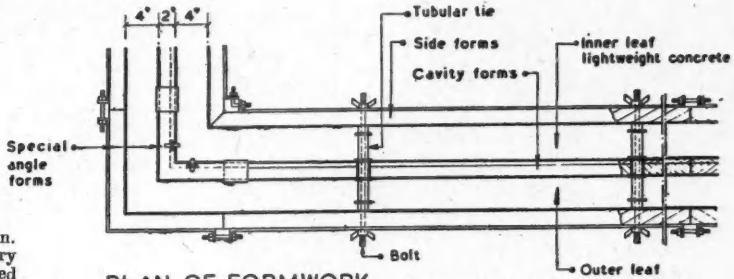



Cavity forms conversely tapered from 1½" to ½" thick supported on tubular ties
Notches to engage tubular ties
d.p.c.
Weep holes at 6'-0" centres

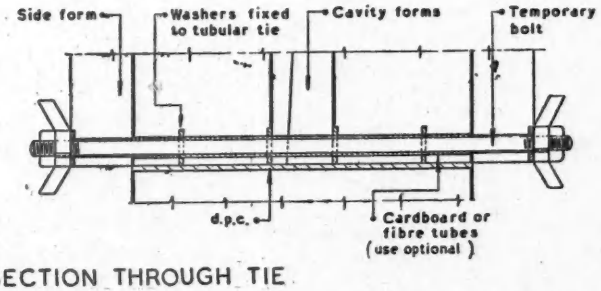
VIEW OF CAVITY FORM



GENERAL VIEW OF FORMWORK



PLAN OF FORMWORK



SECTION THROUGH TIE

and inner leaves separated by a 2 in. cavity. The outer leaf is of ordinary dense concrete and the inner of foamed slag concrete. The pair of houses illustrated have been given a light cream Tyrolean finish, whilst the other pair have an external rendering of pink "Cullamix." Internal load-bearing and party walls are of similar construction to the external walls except that, in order to minimise sound transmission, standard metal ties are used for the cavity party walls instead of the tubular type. Partition walls are constructed of foamed slag concrete and are 6 in. and 4 in. in thickness on the ground floors and 2 in. on the first floors. Reinforcement is inserted at load-bearing points.

All doors have timber frames, the window frames for one pair of houses being of steel, whilst timber is used for the second pair. Accommodation comprises three bedrooms, living and sitting rooms, bathroom and lavatory combined. An attached outhouse contains a coal store, w.c. and washhouse.

The first pair were designed when timber and steel were virtually unobtainable and have floor joists, ceiling joists, purlins and rafters, all of precast reinforced concrete units, whilst the staircases were constructed of in-situ concrete. It is thought that this pair must approximate to something like 95 per cent. concrete, and it is doubtful whether there are any more truly concrete houses in the country. The drawings illustrated represent the second pair of houses, which have steel roof trusses and purlins, *not* concrete as in the first pair. Roof tiles for the first pair are of the Marley concrete pattern and harmonise with the old traditional Cotswold stone tile of the district. Bridgwater tiles were used for the second pair, and the roof structure was of the "Speaker" patent steel and timber type. All floors in the first pair of houses are finished in "Asphalteen," the contractors for which were Asphalt Specialists, Ltd., of Bristol.

The "Corvus" system is readily adaptable for other types of houses, and it is expected shortly to apply it to bungalows and two-storey blocks of flats. The architect was Mr. C. D. Carus-Wilson, M.C., F.R.I.B.A., and the contractors were Messrs. William Cowlin and Son, Ltd., of Bristol.

HOUSING: THE TENANT'S ANGLE

ARCHITECTURAL ASSOCIATION ADDRESS

At a meeting of the Architectural Association held at 36, Bedford-square, W.C.1, on Wednesday, November 27, Mr. P. L. Leigh-Breese, Secretary of the Guinness Trust, spoke on "Housing from the Tenant's Angle." Mr. Graham Dawbarn, F.R.I.B.A., President of the Association, was in the chair.

The speaker, after giving details of the work of the Guinness Trust, said the best way for him to tackle his subject would be to take a working-class family consisting of a father, a mother, a boy of school age and an infant girl, and go through the week with them. This would illustrate the problems of an average family working and living together. Starting with Monday, the first important item was breakfast. In a working-class family breakfast on a week-day was a meal of three shifts. The father breakfasted first. This was usually a bit of a scramble. Next, the boy had his breakfast before going to school. Finally, the mother gave baby what remained of its breakfast and had her own. In connection with breakfast and other meals, architects should consider the layout of the kitchen: a well-planned kitchen was the secret of any good home. Its equipment should be up to date, with plenty of cupboards, one of these being tall enough to take brooms. There should be a built-in dresser with shelves. There should be a food cupboard four feet square, a sink, draining board and gas copper. The kitchen should be square in shape, and its floor space should be 100 sq. ft. Among other items there should be room for a table where at least two people could sit down.

Breakfast over, there came washing up. The sink should be of an adjustable height. A simple test for the correct height was for the user to stand beside it and drop her arm. The longest finger should then just touch the floor of the sink. After washing up came dusting round and then the weekly laundry. The Trust had found that its tenants liked facilities for doing their laundry in their own flat with a good communal drying room elsewhere. If it was done in the flat, the mother could do it in reasonable peace, and at the same time keep watch over the baby. If a large communal laundry outside was provided there should be ample facilities for women to take their babies there. As the tenant liked to do the washing in the kitchen, the Trust provided a gas copper. The procedure with the drying room was that it was opened at half-past twelve. The tenants brought down washing that had been squeezed out, and hung this on numbered lines. The drying room was then locked until half-past four, by which time the clothes were dry and the women took them away. The flat should include an airing chamber so that clothes, when ironed, could be kept aired.

After the laundry came shopping, and then dinner for mother and baby. After dinner the housewife finished tidying up. She might take out the younger child, and it was vital in dwellings of this kind that there should be on the ground floor perambulator sheds accessible to the different blocks. In the evening, when the family were all at home, there would probably be a meal all together in the living room, in which room there should be facilities for this purpose and for the Sunday dinner. For that reason the kitchen should be next to the living room, and it was convenient to have a cupboard in the kitchen with a hatchway opening into the living room. After the evening meal came the boy's home-work. He would want a corner for this. It was an advantage if his bedroom was big enough for his own small table and chair, but it should be remembered that this would mean extra light and heat during eight months of the year.

Cupboards.

In the living room there should be ample cupboard space: the provision of a cupboard in that room taught children to be tidy. After the boy had gone to bed the parents would sit down to a reasonably peaceful time. During eight months of the year they would need warmth, and if he had his way he would make the open coal fire compulsory in the living room, because nothing contributed so much towards an average happy home as a good, cheery, open fire. Gas or electricity would be suitable for bedrooms. In the evening there would probably be the wireless; so that architects must think increasingly of sound insulation, particularly in this type of dwelling. Thus, a family such as he had described required a dwelling room of adequate size, kitchen, two bedrooms, bathroom and lavatory. This was what the Trust understood as a three-room dwelling, and the law allowed such a flat to house five persons. He commended to architects the 1944 Housing Manual and the similar publication issued for Scotland.

Coming to Tuesday, the speaker said that would be ironing day and he would like to see an electric plug not only in the kitchen but also in the living-room, because many mothers preferred to do their ironing in that room. Wednesday was turning out day. If father worked in a shop, and Wednesday was early closing day, he would be home in the afternoon, and his amusements must be thought of. There should be a liberal provision of allotments. Thursday was very similar to Tuesday as a rule.

Rents and Rates.

Friday was generally pay-day. This raised the question of what the family could afford to pay for rent and rates. The Trust said one-sixth of the weekly income. At one time it had said from one-sixth to a quarter, but with the increased cost of other things he would say it should not be more than a sixth. But how were rents to be kept down to the necessary figure? The answer was provided by Government subsidies. He had worked out some figures and found that the average weekly rent per room of the Trust's last estate built before the war was 3s. 7½d. If rents were worked out now on the same basis without subsidy the rent would have to be 6s. 7½d. per room; but if the Government subsidy was granted the Trust would be able to keep its rents down to 3s. 8d. per room. In their oldest buildings—nearly fifty years old—the lowest inclusive rent for a one-room self-contained flat was 2s. 9d., while the highest, for a four-room dwelling, was 9s. 7d. In the buildings erected between the two wars the comparable figures were 5s. 9d. and 20s. 5d. Buildings erected in 1891 cost per dwelling £20 for land £153 for building. By 1901 the total cost per dwelling had gone up to £216. By 1921 the figure was £1,150, but by 1932 it had come down to £617. By 1938 this had increased to £661, but the point was that in the period after the last war it had gone up to £1,150 and eleven years later had come down to £617. It might be the same this time. In forty-seven years the cost per dwelling had multiplied by four, an increase due partly to improved amenities and partly to greater cost of land, labour and materials. The Trust endeavoured to make the payment of rent and rates as simple as possible. Rents were not collected at the door, but there was on each estate a central office where tenants called and paid. At a recent conference at the County Hall he had been interested to hear the chairman of the London County Council say they had decided to collect all rents at the door.

Coming to Saturday, this was a busy shopping morning, and there was always a rush. On Saturday, too, the father was probably home to dinner and the boy was home all day. There must be a playground equipped with swings, etc., and with a high wire fence so that ball-games could be played. Saturday was bath night. It was worth while, even when trying to cut costs, to build in a good many details such as a large towel-rail, a hand-basin, a soap-dish, and a holder for the toilet-roll. If this was not done the property would be defaced by nails and screws. Saturday was the weekly night out, and if father was normal he would like his drop of beer with his mates. If a public-house could be provided on a corner of the estate so much the better, and it should be comfortable enough for the wife to go there. A community centre on the estate should provide facilities for dancing, acting, concerts, demonstrations and refreshments. But he hated the term "community centre"; if you used the word "club" the tenants knew what you were talking about.

ARCHITECTS' REGISTRATION ACT

RECENT MANCHESTER PROSECUTION

The following report of proceedings under the Architects' Registration Act appeared in the Manchester *Evening Chronicle*, dated December 6.

Percy Gordon Kelvey (61) was fined £10 at Manchester to-day for practising as an architect without being registered. He was ordered to pay three guineas costs. Kelvey pleaded guilty.

Prosecuting on behalf of the Architects' Registration Council, Mr. J. Eva, solicitor, said Kelvey was not registered as an architect, but set up business at Moss-lane East, Moss Side, and had done a considerable amount of architectural work. He had a plate on his door describing himself as "architect and surveyor," and was also registered in Kelly's Directory as an architect.

"His work is of somewhat a crude character, and as such is not worthy to be associated with the name of 'architect.' The Council is concerned that the public should think this is the sort of work turned out by registered architects." Mr. Eva added that Kelvey had expressed his regret and said he would cease work as an architect and intended to withdraw the nameplate from his door and have his description amended in Kelly's Directory.

Mr. W. J. Moore, barrister, defending, submitted that Mr. Kelvey had worked as an architect for 37 years, and although he had twice applied for registration with the Council he was unable to find enough qualified architects to support his application. He therefore decided to take the risk of carrying on business without being registered.

"I submit that his work is not of a crude nature," said Mr. Moore. "All his work done in Manchester has had to be submitted to the Manchester Corporation, and the Corporation are known as a people who require accuracy and minuteness of detail in their plans."

IS TOWN PLANNING A SCIENCE?

LUNCH-TIME TALK

PROFESSOR J. D. BERNAL, M.A., F.R.S., addressed a lunch-time meeting of the Town and Country Planning Association at 28, King-street, W.C.2, on Thursday, December 12. His subject was "Is Town Planning a Science?" and following are notes on his remarks.

The objective of town and country planning is, in a broad sense, the continuous production and modification of an environment suitable for the carrying out of the life and work of the community. In itself the planning of towns is a very old human achievement. There were planned cities in Babylonia and Greece long before there was any modern science. The planning in the ancient world would never claim to be a science: it was essentially an art, practised under the patronage of rulers whose object was generally one of prestige to be achieved through orderly and beautiful arrangement of buildings.

Characteristically enough, the nineteenth century, which saw the greatest development of physical and biological science, was the period in which the art of town planning reached its lowest ebb. The reason for this, of course, was the guiding principle that the pursuit of individual profit was the only criterion of all economic and social action, and the practical corollary, that as no one could make any money directly out of beautiful cities, to plan them or to construct them would be unjustifiable waste of resources.

We are now in a period of reaction against this view. The origin of this reaction was the work of the somewhat idealist reformers such as Ebenezer Howard, but the greatest of them, Patrick Geddes, was himself a scientist and envisaged town planning as analogous to the regular development of a single organism. Nevertheless, the degree to which town planning can be called a science is still rather a limited one. It has hardly passed the stage of classification and description which biology achieved at the beginning of this century.

Insufficient Known.

The actual planning of towns has, until recently, been in the hands of architects and engineers, whose work is directed by intuition, that is, by the manipulation of traditional solutions in the light of the particular demands of each situation. The solutions advocated are still often influenced by the monumental approach of the classical city planners. The fact is, we do not know enough about towns to be able to plan them scientifically, and until we do we will have no guarantee against making mistakes which, although different from those made before, may have, in the long run, almost as bad effects.

This has been recognised by modern town planners, and the first step towards making town planning a science has been taken in the Institution, with quantitative surveys as the basis for planning, an idea, incidentally, which we owe to Geddes, but which has only been fully carried out in the last decade. By surveying existing towns and conurbations in the light of their multiple functions—habitation, distribution, production, civic life—some of the determining factors in the planning are emerging and the beginnings of a scientific theory of human aggregations is appearing, one of the most interesting being the concept of the sub-unit of the neighbourhood group.

Survey alone, however, can only be considered as a beginning of science. Planning can never become scientific unless surveys are matched with experiment. This is the great opportunity we have today in the building of new towns in our own country, from the very first, which can be an experiment—and to a considerable extent a controlled experiment—in town and district planning. The study of the life of a town is, of course, far more complex than that of any subhuman biological system, but the methods used by ecologists and agriculturalists can well be employed as a start to discovering those peculiarly adapted to the social field. Of them, the most important perhaps is that the experiment itself must be planned with a view to what it is hoped to find out, and, therefore, the scientists must have their part in the planning alongside the architects and the engineers. Their function is quite distinct; it is to see that whatever the proposals are, they must be such as to enable valid and significant conclusions to be drawn, that is, the proper statistical check, using samples, must be arranged from the beginning. In this way the results from the very first experimental towns will be available as the others come into construction and what we shall have will be a whole series of experiments giving us more and more knowledge and helping us to plan with more and more certainty of achieving successful results. It is this scientific check that can help to remove from the conception of planning what is often—though sometimes for the worst reasons—urged against it, namely, that the planners are directing a way of life to the planned. This ceases to be true when there is no distinction between planners and planned, when both are at the same time observers and the observed in the scientific experiment.

Once planning becomes a science it does not cease to be an art. All that science does is to establish certain relations; we are still free within the limits that these relations impose to arrange things in an enormous variety of ways. Not knowing what the limits are, or ignoring them, does not give any freedom; it simply means that results—and generally bad results—will be obtained contrary to the planners' wishes. The more we understand about planning scientifically, the more the cities of the future will combine the characters of freedom and order.

R.I.B.A.

Council Minutes.

FOLLOWING are notes from the minutes of the Council meeting held on November 12:—

The Honorary Corresponding Membership.—The Secretary reported that M. Paul Vischer had accepted nomination to the Honorary Corresponding Membership.

R.I.B.A. Annual Dinner, 1947.—The R.I.B.A. annual dinner is being revived in 1947, and a small committee has been formed to make the necessary arrangements.

R.I.B.A. Annual Conference, 1947.—The Council have accepted the invitation of the Royal Institute of the Architects of Ireland to hold the R.I.B.A. annual conference in 1947 at Dublin.

Control of the External Appearance of Buildings.—It was agreed to set up a small committee, composed of representatives of the R.I.B.A. and the Council for the Preservation of Rural England, with the following terms of reference: (1) to examine and report on existing powers of control, the manner in which they are exercised, and the extent to which they fulfil or fall short of the requirements of planning authorities; (2) in the light of this examination and of past experience to report on what amendments to existing legislation are necessary to provide architectural service to planning authorities on a more practical footing, such proposals to be defined and methods of carrying them out clearly outlined.

Resignations.—The following resignations were accepted with regret: J. E. Newberry (F.), I. B. Fell (A.), J. F. Schofield (A.), P. R. Wilson (A.), D. B. P. E. Davies (L.), and J. S. Jarvie (L.).

Applications for Transfer to Retired Members' Class under By-law 15.—The following applications were approved: as Retired Fellows—A. Foster, R. A. Landstein, and J. T. Mair; as Retired Associates—H. L. Samson and D. Williams; as Retired Licentiates—A. Rangeley, J. E. Stott and G. H. Treacher.

MEMBERS RELEASED FROM SERVICES, ETC.

The following members have notified the R.I.B.A. that they have been released from the Services and are resuming practice, and would like to receive trade catalogues and other data: L. W. M. Alexander (A.), Messrs. Harris & Hobson, 10, Water-st., Liverpool; H. Austin Barton (A.) (late Lt.-Col., R.E.), 2a, Princess-st., Camberley, Surrey; R. W. Brough (L.) (late Lt., R.N.V.R.), Messrs. M. Rainsford, Fletcher & Partners, 13, Ambrose-pl., Worthing; D. Stratton Davis (A.), Messrs. Stratton Davis and Yates, 12, Queen-st., Gloucester; A. H. Dawes Dingle (L.) (late Capt., R.E.), 74, Ferryhill-rd., Aberdeen; S. R. Edwards (L.), 6, Princess-sq., Plymouth; J. Fisher (Student) (late Major, R.A.), "The Homestead, 33, Duddingtonla., South Wilford, Nottingham; S. H. Fisk (L.), Messrs. Burley & Fisk, 16, King-st., Cheapside, E.C.2; M. Rainsford Fletcher (L.) (late Capt., R.E.), 13, Ambrose-pl., Worthing (Worthing 1125); H. J. Grose (A.), 1, Marlborough Mansions, Cannon Hill, N.W.6; H. J. Hitch (A.) (late Fl/Lt., R.A.F.), Colburn House, St. George's-pl., York; C. J. Jerram (A.) (late Lieut., R.N.V.R.), 25, Meadway, Gidea Park, Essex; G. Gray (A.) (late Major, R.E.), County Architect's Department, County Offices, Haverfordwest, Pembrokeshire; F. Risdon (A.), 122, Barnfield Wood-rd., Beckenham, Kent; K. P. Roberts (L.), (late Major, R.E.), 9, George-st. West, Luton; D. Smith (A.), 10, The Crescent, Northampton; K. A. Stevens (A.) (late Major, R.E.), "Brindle Bank," Third Acre Rise, Oxford; W. F. Stewart (A.) (late Capt., R.E.), "Parkside," Beaconsfield, Bucks; E. Clough Tasker (F.), Falconer-chambs., Huntries-row, Scarborough; L. Tattersfield (L.) (late Lt.-Co., R.E.), "Celarm," Rose-ave., Retford (Retford 252); C. A. Weller (L.) (late R.E.), 26, Temple-st., Aylesbury (Aylesbury 819); H. Wylie (A.), 29, Barnton-gdns., Davidson's Mains, Edinburgh, 4.

Part-time Study.

Letters have been received from students desiring part-time or evening training in architecture to the effect that they have been unable to secure admission to a suitable technical college or art school. This matter is receiving the attention of the R.I.B.A., who would be glad to hear of any students who experience the difficulty referred to above. Letters should be addressed to the Secretary, R.I.B.A., 66, Portland-place, W.1.

Membership.

ON Tuesday, December 10, the following members were elected:—

AS HONORARY ASSOCIATES.

E. C. Kember. The Rev. C. B. Mortlock, M.A.(Cantab.), F.S.A.

AS HON. CORRESPONDING MEMBERS.

C. Contreras. P. Tournon.

AS FELLOWS.

H. J. Benians (Goudhurst). M. S. Green (Totnes).
D. Clarke Hall (London). J. J. Hill (Southampton).
G. R. Clayton (Durham). H. B. Rowe (Exeter).
L. F. R. Coote (Oxford). H. R. Surridge (Kettering).
R. G. Covell (London). C. J. Tomkins (Norwich).
J. D. Wylson (London).

Overseas.

D. R. Harper (Cape Town).

As Associates.

H. E. D. Adamson (London).
J. W. Adamson (Huddersfield).
R. Aitchison (Glasgow).
J. P. Allison, M.A., B.Sc. (Irvine, Ayrshire).
N. J. Aslan (London).
L. R. Barlow (Sandwich).
P. Beard (Plymouth).
J. H. Beers (Belfast).
R. M. Betham (London).
G. L. Broadhead (Southsea).
J. R. P. Brooke (Feltham).
N. L. S. Burgis (Brighton).
H. H. Chan (London).
J. H. Cheetham (Warrington).
J. A. Clark (London).
J. F. Clark, D.F.C. (Kinver, nr. Stourbridge).
J. E. Clarke (Carnaloa, Co. Down).
B. Claydon (Bolton).
H. D. Clifford-Turner (London).
H. C. Connell, B.Sc. (Bolton).
G. S. W. Connor (Leeds).
R. T. Cunningham (Coatbridge, Lanarkshire).
F. W. Davey (Twickenham).
H. D. Dawson (Brixton).
J. C. Dixon (Leeds).
K. Dodds (Gosforth, Newcastle-on-Tyne).
Miss M. E. Dolan (Dublin).
M. Dolman (Croydon).
P. J. Doran (Wembley).
L. W. Elliott (London).
R. F. Elliott (Leatherhead).
G. W. Fleming (Craigie, Perth).
W. J. French (Mannerston, nr. Linlithgow).
F. W. Goddard (Edinburgh).
J. J. Gough (Dublin).
A. J. Gray (Reddish, Stockport).
T. C. Green (Runcorn).
J. A. Hague (Northampton).
J. B. Hall (Galashiels).
C. J. A. Hengist (Three Bridges).
T. N. I'Anson (Newtown, Huntingdon)
E. R. Janes (Flackwell Heath).
J. W. Keyes (London).

Overseas.

A. A. Axelrod (Johannesburg).
L. Ayers (S. Rhodesia).
D. M. Calderwood (Pretoria).
Mrs. C. M. Johnson (Moortown, Leeds).
B. C. King (London).
C. T. Larrington (Newton Abbot).
Miss J. E. J. Lewis (Llanishan, Cardiff).
W. C. Lock (Bromley).
J. L. Lumsden (Edinburgh).
G. G. McDonald (Paisley).
S. F. McLauchlan (Llandudno).
L. Massey (Holmes Chapel, Ches.).
G. M. Maw (London).
J. M. Maxwell (London).
D. T. Moffatt (Derby).
Mrs. M. Nattrass (Stockton-on-Tees).
P. J. Needes (Barking).
G. B. Oddie (Ryton-on-Tyne).
D. W. Oliver (Bath).
W. G. Owen (Dudley).
S. G. Page (Surbiton).
M. H. Parry, D.F.C., A.F.C. (Oxford).
E. Passmore (London).
H. A. Patton (Bangor).
G. K. Porter (Cardiff).
H. J. C. Pratt (Goodmayes).
H. J. E. Pyne (London).
H. G. Radford (Allestree).
C. F. Scott (Westbury-on-Trym, Bristol).
J. F. Secrett (London).
M. H. Shepheard (Oxton, Birkenhead).
G. B. Shipp (Nottingham).
J. Smith (Bury).
J. H. R. Squires (London).
R. H. P. Stafford (Surbiton).
D. R. Stewart, B.A. (Bishop's Stortford).
E. T. Thomas (Gosforth, Newcastle-on-Tyne).
K. O. Thoms (Edinburgh).
R. D. Thornley (Luton).
P. Turnbull (Edinburgh).
W. J. Walters (Carmarthen).
J. Waterhouse (Scotforth, Lancaster).
Miss M. Whiteley (Elland, Yorks).
J. Whittle (Loughton).
A. Wildgust (Shaw, Lancs).
G. B. A. Williams (West Wickham).
J. Williams (Liverpool).
D. R. Wyler (Thornliebank, Renfrewshire).
H. C. Floyd (Kenilworth, C.P., South Africa).
H. N. Joubert (Johannesburg).
G. A. S. MacIvor (Cape Town).

As Licentiates.

W. Anderson (Edgware).
H. K. Armitage (London).
C. T. Banham (London).
G. F. Collings (Leicester).
C. W. R. Corfield (Falmouth).
L. Crawley-Challener (Worcester Park).
A. Dadley - Moore (Leigh-on-Sea).
C. T. G. Ducret (Farnborough).
W. B. Gunnell, M.B.E. (Canterbury).
H. B. C. Hawes (Slough).
L. C. G. Herbert (London).
L. Ind (Windsor).
F. E. Jay (Weymouth).
E. P. Kendall (London).
H. G. Kenyon (Newmarket, W. Suffolk).
R. D. Lynde (New Malden).
W. Marsh (Abergavenny).
L. G. D. Ogden (Ullesthorpe, nr. Rugby).
E. Parry (Mold).
W. C. Piggins (Dorking).
W. E. Robinson (Guildford).
N. J. Rushton (London).
J. Schreiner (London).
D. Smith (Rochdale).
H. Smith (Hove).
G. S. Stewart (Fraserburgh).
W. L. Sturton (London).
J. L. M. Williams (Sale, Manchester).
A. W. Willis (Berkhamsted).
P. R. Wright (London).

ELECTRICAL EQUIPMENT IN NEW HOUSES

SOME SUGGESTED IMPROVEMENTS

By F. Geoffrey Marshall, A.M.I.E.E.

THERE are many improvements in electrical equipment capable of incorporation in the thousands of new houses now being proposed and planned that (provided they were decided upon now) would greatly improve the finished installations, without the final costs of the buildings being raised by any appreciable amount.

We are not concerned here with the more expensive type of house which, in all probability, already incorporates most of these additions, but with the standard houses, varying only in details of layout, which are at present being planned.

Two-way switching of lights is, of course, almost universal for stairs and landings, but this should be adopted for hall lights with an additional switch just inside the front door, and also for the kitchen, or whichever room leads to the back door, with the extra switch adjacent to that door, thereby eliminating the necessity of having to grope in the dark when entering, until the switch can be located.

The question of whether coalhouses and other outhouses should be equipped with electric light should also receive serious consideration. These subsidiary lights are, no doubt, a great convenience, but they are sometimes not desired by householders, who realise the danger of such lights being left on by mistake for long periods; provided, however, the outhouses have windows to give light during the day, this difficulty can be got over by wiring them in the same circuit, controlled by the kitchen switch, with, of course, a local switch adjacent to each individual light.

Outside lights over the front and back doors are also very welcome at times, provided they are properly installed with watertight fittings. This latter point is essential if future trouble with the electrical installation is to be avoided.

Lighting the Garage.

It is also a good plan, where garages are provided, for these to be wired for electric light at the time of building, and also provided with a suitable outlet plug-socket for the use of a car heater or inspection lamp. If this is not done initially, it is likely that the wiring will in all probability have to be installed at a later date, which is most undesirable; if installed by an amateur, as is very often the case, this may result, later, in dangerous conditions arising, especially if proper attention is not given to efficient permanent earthing.

Turning now to the interior fittings of the house, there is no doubt that in the future the use of electric clocks, which is already widespread, is likely to become almost universal. These are at present being manufactured in large quantities, production figures are mounting, and as soon as the export market has been satisfied, there will be a sufficiency of these on the home market. Small socket outlets should therefore be provided for these clocks, preferably over the fireplace. This may have the disadvantage of fixing the location of the clock, but it does away with the long length of cable that would otherwise be necessary from the usual plug point on the skirting board.

On the subject of plug-socket points in living rooms a lot has been said and written during the last few years. It is not intended to approach the subject from the technical aspect in this article, beyond stating that it is essential that a sufficient number of 5- and 15-ampere plug sockets should be provided in each room to avoid the necessity of the householder having to made use of adaptors to enable more than one appliance to be connected at one time. Not only are these adaptors cumbersome and unsightly, but they are also liable to result in the overloading of the plug-sockets and their associated cables.

In an ordinary living room it is customary these days for the householder to require a supply for his wireless set, and, very possibly, an electric clock. In addition he will probably wish to have available for occasional use a power plug for an electric fire and also another lighting plug for a standard or table lamp. It can therefore be realised how totally inadequate is the one 15-ampere plug-socket, which in many houses appears to be the only one provided in each room.

Electrical Equipment in Kitchens.

The electrical equipment in the kitchen needs careful consideration for, apart from any electrical cookers, hot plates or kettles that may be used, facilities have often to be provided to give power to a water heater over the sink and to a refrigerator.

This question of electrical connections for refrigerators is one that is likely to be vital in the future, for there is evidence that, like the electric clock, these appliances—both electrically and gas operated—will be on the market in very large numbers in the future, and it is therefore reasonable that we should make provision for these now in our electrical layout of the kitchen.

The provision of electric bells is also one that should occupy our attention in the design of the new house. Most householders these days will instal bells themselves, if the house is not already equipped with them, and if they do, they will assuredly prefer employing bell transformers rather than dry batteries, and this will of course mean that the electrical supply will have to be tapped at some point. The best and most obvious place for the bell transformer to be installed is in, or adjacent to the meter cupboard, and if it is decided, when the house is planned, that it should not be wired for bells, then a spare way should be left in the main lighting distribution board for this purpose.

In many cases certain of the points that have been mentioned will have been provided for, but it is surprising to find how often one or other has not been considered. If these points are left to be decided when the house is approaching completion, then the installation costs are likely to be excessive.

The Work of the British Council.

Some indication of the work of the British Council in making known abroad Britain's achievements in fine art may be found in the recently published 1945-46 Report of the Council. "During the year," states the Report, "the Council continued to show many exhibitions of British work abroad. These included exhibitions of contemporary British art in Egypt, Italy, North Africa, Belgium, Holland, Denmark, France and Czechoslovakia, graphic art in Finland, Iraq, Egypt, Greece, Turkey and China; British crafts in the U.S.A. and children's paintings in New Zealand, Turkey, the British West Indies, West Africa, France, Palestine, Chile and Peru."

A Town Planning Exhibition was shown in Sweden.

THE CONTRACT SYSTEM IN CIVIL ENGINEERING

By NORMAN P. GREIG, B.A., Barrister-at-Law, F.R.San.I., F.I.Arb., etc.

In 1944 was published the Report of the Central Council for Works and Buildings in the form of "The Placing and Management of Building Contracts." In October of this year the Institution of Civil Engineers published Report No. VII, "The Contract System in Civil Engineering," as drafted by a sub-committee of the Post-War National Development Committee. The preface to that report gives us the reason for this latter publication, the fact that there "is a risk of the former Report being read by some as applying equally to civil engineering contracts." The purpose of this article is to consider, as far as the permitted space allows, some of the more obvious differences between the two forms of contract mentioned above, and, at the same time, resemblances.

It is, of course, evident from the outset that both kinds of contracts are governed by the general Law of Contracts; but, as between themselves they differ principally by reason of the different conditions attached to the contract work. It is true to say that, as regards building contracts, they are usually concerned with predeterminable liabilities and quantities, while civil engineering contracts may have to meet with many unexpected and unforeseen conditions. It is therefore worth remembering that by the Joint Demarcation Agreement made between the four Federations of employers and operatives in the two industries, there are four categories of construction work set out, viz., 1, Civil Engineering Work; 2, Mainly Civil Engineering Work; 3, Mainly Building Work; and 4, Building Work.

As to the parties to civil engineering contracts, there is usually a noticeable difference. Much of ordinary building construction is a matter between building owners, who are often private individuals, and contractors; on the other hand, in civil engineering work of any size the promoters as a rule belong to one or other of the following classes: Government Departments, Local Authorities, Public Corporations (*e.g.*, the Port of London Authority or the L.P.T.B.), and Incorporated Companies; therefore the form of the contract is naturally affected by the statutory regulations governing contracts with either of these bodies, whether expressed in Standing Orders, Memorandums of Associations, or the like.

In regard to the engineer under a civil engineering contract, it is obvious and fitting that a high qualification, such as membership of the Institution of Civil Engineers, is generally recognised as necessary for any position of civil engineering responsibility, for such involves the functions of design, technical direction, inspection of materials and workmanship, as well as measurement and valuation. It is further necessary, it is reasonably claimed, that though the engineer's decision should be, and generally is, subject to the right to appeal to an independent arbitrator, he himself should be in a position to exercise free and unfettered judgment in decision. One would hesitate to suggest, in this connection, that an architect under a building contract should act otherwise, when in the position of quasi-arbitrator. It is obvious, however, that where each is the whole-time agent or servant of employer or promoter, he cannot be expected to have the same degree of independence as a consultant would have. The law, however, has laid down with much clearness the position of either architect or engineer in regard to the employer or promoter, and his right to resist any attempt at coercion, when acting as a quasi-arbitrator.

As far as contractors themselves are concerned, their interests are (as regards civil engineering contracts) adequately looked after by the Federation of Civil Engineering Contractors, be their work general, that is, civil engineering work, which includes purely building work, or special, being that class of work undertaken by specialists.

In regard to the contract itself, while there is no standard form such as that published by the Royal Institute of British Architects for the use of the building industry, and though conditions vary very considerably owing to lack of standardisation, yet the Federation of Civil Engineering Contractors and the Institution of Civil Engineers, in 1930, agreed on general conditions of contract, which, as far as possible, should be adopted as the basis of the Contract Agreement.

It is unnecessary to say much of the actual kind of contract decided upon in any particular case. The Report to which we have referred has, as did the Report on Placing, etc., of Building Contracts, discussed at length the respective merits of the different kinds of Fixed Price Contracts (the Bill of Quantities, Lump Sum and Schedule Contracts) and Cost Reimbursement Contracts (cost-plus, cost and fixed fee, and cost and fluctuating fee). It can be said, in regard to this matter, that the contractor, quite apart from the kind of contract that is decided upon, should always, on tendering, be fully informed, as far as is possible, as to his responsibilities under the contract. As to the various forms themselves, the lump-sum contract has many advantages, particularly in the case of small and visible (*i.e.*, above ground) jobs, while the "cost-plus" form, though possessing much-discussed disadvantages, is decidedly useful where work must be begun at once, even before all conditions are fully known. It is true to say, however, that this form is not likely to be met with so frequently now that the urgency of war-time production has—we hope, for good and all—lessened.

As to the sub-contracts, one can say that the system in general use is, to all intents and purposes, that in vogue in the building industry, though here again, there is no equivalent to the R.I.B.A. Sub-Contract for Building intended to be used with the 1939 Standard Form. However, most civil engineering contracts usually provide that the placing of sub-contracts requires the approval of the promoter or engineer, and that the contractor is to be held liable for the faults of the sub-contractor. Also, the "nominated sub-contractor" system, so familiar to architects and builders, is generally adopted, a "provisional sum" being earmarked for special work included in the bill of quantities. It is only right and proper that, as the contractor under the main contract is to be held liable for any fault, or even financial failure, of a sub-contractor, he should have the right to object to the appointment of any nominated sub-contractor on just and reasonable grounds.

Further matters in regard to the civil engineering contracting system are obviously on all fours with those appertaining to building contracts, and it is beyond the scope of this short article to do more than mention the most excellent and comprehensive material contained in Report No. VII in regard to the detailed estimates of the cost of liabilities under the contract, the promoters' requirements affecting the contract price and by no means to be omitted, the observations on engineering administration covering such matters as degree of control by engineer, scheme of operations, relation between engineer and sub-contractor, and last, but by no means least, site records and their use.

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L.M.B.A.

MR. GARRETT'S CHRISTMAS MESSAGE

Mr. E. W. Garrett, President of the London Master Builders' Association, has sent the following letter to the chairmen of Areas into which London is now divided, asking them to convey it in their own way to their members:—

"The year that is passing has seen a notable growth in L.M.B.A. activity, including the very wide area over which you preside with such enthusiasm. Our membership during the year has risen by 248, and now stands at the record figure of 1,718. Wise builders, as we were reminded recently, belong to the National Federation. If there are still any builders of substance left in your Area who are not members of the L.M.B.A. (the London Region of the National Federation) I hope you will get your members to do everything they can to rope them in as quickly as possible. Next year we celebrate our 75th birthday, and it would be a great feather in our cap if, when we celebrate it, we could say that every builder in London worthy of the name was a member.

"During 1946, in circumstances of considerable difficulty, we have done much useful work for the building industry, all of which you will find set out in our annual report, which you will receive in January. The importance of the L.M.B.A. and the National Federation grows with the years, but it is on the individual efforts of the individual members that its expansion depends, and I am grateful to you for the consistent co-operation I have received during my year of office from you and your fellow-members in your Area."

PRODUCTION FORUM

SUGGESTIONS FOR INCREASED OUTPUT

To the Editor of *The Builder*.

Sir,—Judging by the figures given by an expert like Mr. Layfield, estimating for brickwork must be an estimator's nightmare when output ranges from 20 to 100 bricks per hour. It should be remembered, however, that increased output is dependent upon many other factors. To-day we have no "black" Monday, but records will prove that it is a very bad day for output. Output rises on the peak days—Wednesdays and Thursdays—and then declines to Saturday, which is another bad day. Other factors that are overlooked are "corner men" and skilled bricklayers' labourers. These are the key-men for successful output and should be recognised by the union and master builders as being higher-rated men.

The time has come to face the fact that an average of 350 per eight hours is the most that can be expected of the bricklayers and methods of to-day, therefore building contractors must look to other methods to improve output and keep the costs of building down. Here are a few suggestions :

(1) Movement to manufacture a larger size brick, say, 3½ in. by 9 in. by 9 in., and specially made bricks embodying closures for jambs, reveals, quoins, etc.

(2) The omission of English and Flemish bonds from certain types of buildings and the substitution of English garden or facing bonds, Sussex bond, etc.

(3) Abolition of sharp sand and cement-mortar.

(4) Mechanical improvements, such as self-raising scaffolds, so that men can work at a uniform height; automatic mortar spreader, coupled with a water-sprayer for wetting and grouting up, etc.

(5) Mechanical conveyor belts so that materials are constantly at hand for the bricklayer.

(6) Improvements in the conditions and status of the men.

Too often the clerk is considered of more social importance than these men, with the invariable result that the better class of man is not attracted. I understand that in the U.S.A. building workers are considered of considerable importance in the life of the community, and that output there is considered to be the highest in the world.

It has been my experience that most firms, on the grounds of economy, have no desire to keep together the units on their sites, and let them disperse after the completion of the jobs they are doing. This is a mistake, as the average building worker does not like changing his employer or foreman, and would much prefer to remain with the group of men he has worked with for some time. The Government has a housing problem of the first magnitude and I feel that the problem could be partly solved by the Government getting the unions to agree to piece rates under Government guarantee.

I suggest that piecework be given a trial by the unions. It could, for a commencement, be restricted to works carried out by local authorities.

It is also my opinion that no person on a building could possibly carry on were he to adhere conscientiously to the rations.

I have specifically mentioned brickwork and the bricklayer because the costs of his work have a far-reaching effect on the general costs of building and not because other trades do not require consideration in like manner. It is understood that there are 50,000 to 100,000 small builders, under licence, mainly tinkering about with paint and distempering brushes. Fifty-thousand recognised union master "piece-raters" would get somewhere!

Wilfred O. Steffens.

London, S.W.20.

INDUSTRIAL HEATING

A LONDON PAPER

A paper on "Industrial Heating" was delivered to the Institute of Economic Engineering at the Cowdray Hall, London, on December 13, by Mr. J. R. Kell, A.M.I.Mech.E., M.I.H.V.E., M.Inst.F.

The speaker said that it had been found that the lowest average temperature for maximum efficiency is about 55 deg. F. for manual and 60 deg. F. for sedentary work : the replacement of heat lost from the body might be effected either by surrounding individuals with an envelope of warm air or by directing radiant heat on to them.

There were two principal divisions of heating systems : convective systems, such as the warm air or plenum system, and unit heating systems; and radiant heating systems. In the plenum system air was drawn in from outside, or from the factory, by a fan and warmed over coils heated by steam or hot water, and delivered through a series of ducts. In the unit heating system heat was transmitted by steam or hot water to various points in the building, at each one of which a small variation of the plenum system was provided.

Radiant heating systems were less common in industry, and could be subdivided according to temperature. (1) High temperature : luminous gas or electric radiant heaters fixed overhead. (2) Dull emitter panels (gas or electric) working at about 600 deg. F. (3) Flat plate panels heated by steam or high-pressure hot water to about 300 deg. F., generally fixed overhead. (4) Flat cast-iron or steel panels, using hot water at low pressure (160-180 deg. F.). (5) Embedded panels, 100-120 deg. F.

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Systems which combined both convection and radiation were ordinary radiator and pipe surface emitter systems.

It was an open question as to which system was to be preferred. The present tendency, both here and in the U.S.A., was towards the use of radiant systems : these, however, were most costly to instal and more difficult to make really effective than convection heating systems. On the other hand, convective heating generally involved higher temperatures near the roof than near the floor : on the whole, the radiant system was the most economical in fuel consumption.

The speaker then turned to the cost of running the heating installation in any factory building, and said : "This involves an evaluation of (a) Total maximum heat demand, or heat loss in coldest weather; (b) The average rate of running over a heating season ("weather factor"); (c) Hours of running per heating season; and (d) Losses in night banking, mains losses, etc."

Under (a), the speaker considered the subject of insulation of buildings, and in this connection suggested reduction in the glass areas in roofs or walls, and in reducing air changes by minimising leakages, etc. Under (b) he discussed thermostatic control, and pointed out that this method could only be employed effectively where the system was sufficiently large and efficient. Under (c) and (d) the speaker dealt with various methods of effecting economies in fuel, both in actual running and in night banking. In general, intermittent heating was more economical for buildings of light construction, and continuous heating was more economical for buildings of heavy construction. Mains losses could be minimised by careful lagging.

SHORTAGE OF TIMBER

L.M.B.A. PRESIDENT'S WARNING

Warning that the shortage of timber and of labour may hold up the rebuilding of the City of London was given by Mr. E. W. Garrett, President of the London Master Builders' Association, at the December luncheon of Central No. 3 Area, in the Holborn Restaurant. Mr. R. L. Roberts, chairman of the area, presided, and the Minister of Works, Mr. George Tomlinson, was among the guests.

In the course of his speech, Mr. Garrett said : "I should like to strike an optimistic note about the building outlook for the new year, but how can I in the light of the facts by which we are surrounded? Some materials will, no doubt, be more plentiful, but the vital raw material of the building industry, particularly for housing, is timber, and that is coming in only at the rate of 25 per cent. of the pre-war figure.

"With a quarter only of what we previously obtained, we have a vastly increased demand from all sorts of sources, with the result that new houses are being held up and repairs and maintenance are being neglected.

"The labour position is hardly less critical, for all the signs are that the labour allocation for London is not likely in the near future to exceed its pre-war strength. What does that mean? It means that we have got to ask ourselves very seriously whether London, as London, London as the cultural and commercial centre of the Empire, is really going to be rebuilt.

"If, with our present labour force, we are failing to build the houses we need in sufficient quantities, and houses are a poor training ground on which to train the operatives we need for the great build-

ings which will be the monuments to the age in which we live, how are we ever to rebuild the city? There is only one solution I can see to the problem, and that is an increase all round in the productivity of the building industry. In London we have an active committee at work on the problem, and both sides of the industry are fully alive to its importance."

Mr. Garrett questioned a figure which the Minister of Health gave a week or two ago about the number of men employed in the building industry in London. Mr. Bevan said that the labour force in London had increased from 343,900 on July 31, 1945, to 603,900 on September 27, 1946, but that only a quarter of the men were engaged on permanent house construction.

"These figures," said Mr. Garrett, "are entirely contrary to the facts as we know them."

CAST IRON RESEARCH ASSOCIATION

SILVER JUBILEE LUNCHEON

THE evolution of a virtually new material which will put ordinary castings into a new class mechanically and with respect to heat and corrosion resistance will provide a new basis for the development of high duty and special cast irons was announced by DR. HAROLD HARTLEY, President of the British Cast Iron Research Association, in London, on Wednesday, December 11.

Dr. Hartley, who was presiding at the Silver Jubilee luncheon of the Association at the Connaught Rooms, said: "We have succeeded in casting iron into the mould with a graphite structure of nodular or spherical form instead of being in the stringy, elongated flake structure usually found in grey cast iron. What we regard as the most significant feature of this new development is that it is applicable and, indeed, most readily applicable, to the medium and high as distinct from the low carbon and silicon irons; that is, to the irons most easily castable and which are least subject to shrinkage in casting, as well as being the most readily machinable.

"The new material possesses the properties of the present high duty irons without special compositions or treatments, and yet remains readily castable and machinable. It will involve a new approach to the design of iron castings and will undoubtedly influence every branch of the industry."

Referring to the question of funds to carry on and extend the work of the Association, the speaker said consideration was being given to the desirability of obtaining financial backing by means of a properly organised levy throughout the trade.

MR. L. H. KEAY, P.R.I.B.A., referred to the varied extent to which cast iron was used by architects apart from the more common uses as pipes, gutters, etc., and said: "A material may fall into disuse for many reasons. A new material may take its place if it has other properties rendering it more suitable for specific purposes. On the other hand, a change in fashion—and there are fashions in art—may restrict its use. A wrongful use of a material may prejudice its use in conditions in which it would be eminently suitable.

A Building Uses Department.

"I understand that you have recently stabilised a Building Uses Department in charge of a consultant architect, Mr. Bridgwater, and I commend your Association for the wisdom of this step. There is little doubt that one of the reasons for a decline in the use of cast iron was due to the flamboyant antics of those responsible for the extraordinary erections still to be found in many of our seaside towns, many of which were in the process of development in the years of declining taste in the Victorian period. There is no need for so much ugliness in the world. It can be reduced, if not prevented, by the closer co-operation of the technician and the designer. In the world of building there is still much to be explored. New uses will be found for old materials and new materials may replace those with which we have long been familiar. The information which your new department will make available to architects and industrial designers will be of inestimable value."

Proposing a toast to "The Association," MR. W. LEONARD, M.P., Joint Parliamentary Secretary to the Ministry of Supply, said: "Britain must regain her position in world trade and raise the standard of living of people in this country and in the rest of the British Commonwealth, and to do so British industry will have to work wonders of reconversion. But this cannot be done in the case of any single industry unless much effort is devoted to imaginative planning, reorganisation and research. To increase your scientific research you will need money, as I well know. Something like one-third of your total income is provided by Government grant, and you can earn two-fifths. The more you subscribe the more we pay. Bearing in mind the point that the new development will affect practically every branch of the industry, it may be that the time is ripe for the industry as a whole to support the Association by means of an equitable form of levy. I think I can say that the Government would sympathetically consider any request for assistance in connection with the operation of a levy scheme which commended itself to the great majority of the industry."

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DESIGN IN NEW TOWNS

A LONDON TALK

THE importance of employing the principles of good design in the construction of new towns was stressed by MR. DAVID B. WILLIAMSON, B.Sc., in the course of a lunch-time talk to the Town and Country Planning Association on Thursday, November 28. MR. THOMAS BRADDOCK, M.P., F.R.I.B.A., was in the chair.

MR. WILLIAMSON, whose subject was "New Beginnings and New Towns," said he wished to approach planning and the new town idea as a non-expert, as a man in the London street. He wanted to get back to the fundamental question that the dwellers on new town sites especially ask themselves—"Is all this upheaval necessary?" After dealing with the questions of health, fuel supplies, road and rail traffic congestion, education and juvenile delinquency, the speaker continued: "At the 'Britain Can Make It' exhibition we are showing the world our skill in design. The design of our homes and towns is of equal or greater importance. Let us not restrict beauty to export: let us take pride in the good design of the daily needs of life about us: in the good design of houses, shops, factories, theatres and churches; in neighbourhoods for our delight, as well as in the good design of products in our shops. Especially in this context I would emphasise the statement in the New Town Report that 'the advantages of a high standard of design are largely negatived if the equipment is inferior.' I think it most important to stress that point. It is possible to make improvements in the following directions: 'Better heating arrangements, constant hot water, better cooking facilities, better kitchen fittings, better arrangements for washing and drying clothes, more efficient plumbing and sanitary fittings, more room for storage, more connections for light and power, and better day lighting.'

"The corporation of each new town should make it clear at the outset that good standards of design and construction and of equipment are to be adopted, and the vigilant eyes of the citizens—and of each one of us—should see that such standards are attained. Expense was not spared when building mulberry ports; rafts for civilisation should not be spoiled for ha'p'orths of tar.

"In regard to new towns especially it should become clear to manufacturers that it is 'a matter of good design or poor sales.' The incentive to many a man to give of his best in design and workmanship for his own people may excel any incentive he may be induced to feel about sending his best goods to discriminating overseas purchasers.

"With the better standard of living and education in a new town, the value of good design will become increasingly appreciated as the years go by. Our immediate responsibility is to see that this principle is built into the very fabric of each new town. This will be directly effective in showing what can be done, to ourselves and others: it will also be directly effective in encouraging the invisible 'export' of tourist currency.

"In the years before us people will come to Britain to see the beauties of our domestic and historic architecture, to see the war scars of Britain, to explore our country and coastline, and to meet us in our homes. I believe that many will come with these as secondary objectives: very many will arrive from a world in the throes of reconstruction to see what Britain is making of the job."

IN PARLIAMENT

Roosevelt Memorials.

MR. JANNER asked the Prime Minister whether in connection with the rebuilding of the House of Commons, consideration could be given to installing some plaque in memory of the late President Roosevelt in order to commemorate the deep regard which Members of the British Parliament had for him.

MR. ATTLEE said that successive Governments had for many years followed the general rule that no memorial should be erected in the Palace of Westminster to any individual within 10 years of his decease except in accordance with the resolution of both Houses of Parliament. Even if such a resolution were passed, having regard to the time necessary to complete the new building scheme, it would not be possible to show the tablet for some years. The House would be glad to know, however, that he was in communication with the Dean of Westminster with a view to setting up a tablet in memory of the late President Roosevelt in a suitable position in the Abbey.

MR. ATTLEE circulated the following statement, giving the opinion of the Royal Fine Art Commission on the proposed Roosevelt memorial:—

The statement by the Chairman of the Royal Fine Art Commission is:—

The design for the statue and its setting as first presented to the Commission showed a standing figure in a cleared space in Grosvenor-square. The Commission on being informed by the memorial committee that the site had been determined and that the sculptor had been asked to portray a standing figure, limited their observations to those arising from the design itself, the relation of the statue to its setting and the layout of the square.

The Commissioners were shown a small plaster cast of the figure by the sculptor; and they discussed the pedestal, the base, the exact location of the statue, and the treatment of the square with the committee's architect and the representative of the Ministry of Works. They also visited the square accompanied by the architect and the Ministry of Works representative.

After full consideration they recommended certain revisions, including the retention of more trees, an alteration in layout and an amended design for the pedestal. At this stage, in order not to delay the appeal, the Commissioners gave general approval to the scheme, as subsequently illustrated in the souvenir books published by the committee, and stated that, in their opinion, the plaster cast would be a suitable model for the eventual figure in bronze.

At a further meeting with the committee's architect and the Ministry of Works representative, the amended layout was accepted as appropriate, subject to further modifications in the design of the paths and basins. The pedestal has still to be finally approved, and discussions with the committee's architect on this point are proceeding.

Lead Stocks.

MR. MARPLES asked the Minister of Supply if he was aware that stocks of refined lead had fallen from 121,900 tons at July, 1945, to 19,800 tons at September, 1946; and what action he was taking to increase the present stock.

MR. LEONARD said that every effort was being made to import as much lead as possible, but in present conditions of world shortage he saw no prospect of building up stocks.

Midday Meals for Workers.

MR. DRIBERG asked the Minister of Food if he would state precisely what series of steps should be taken to secure packed midday meals for building trade workers employed by small firms in rural areas; whether it rested with employers or employees to take the initiative in this matter; and what steps could be taken by workers, or by his department, in cases in which employers were unwilling to make the necessary applications and returns.

DR. SUMMERSKILL said that application should be made to the Food Executive Officer for a canteen licence. Responsibility for providing a meals service normally rested with employers, but any responsible group or organisation of employees might apply for a licence and might undertake to carry on the service.

Industrial Premises in Greater London.

MR. SPARKS asked the President of the Board of Trade how many applications he had received for sites for industrial purposes in quasi-satellites and new towns within the scope of the Greater London Plan, how many of these were for the transfer of industrial undertakings from areas in London and Greater London, and how many were new undertakings?

SIR STAFFORD CRIPPS said that some 1,500 firms had notified their desire for new industrial premises in the area of the Greater London Plan. Those included about 200 firms who had shown an interest in the possibility of sites in new towns or quasi-satellites. The applicants were predominantly existing London firms; but the split-up asked for in the second and third parts of the question was not immediately available. He would add, however, that the new towns and quasi-satellites were intended to accommodate firms moving out from the congested parts of London and approval would not normally be given to new undertakings or to firms from other parts of the country.

Rural Housing.

During a debate in the House of Lords on agriculture, complaints were made of the inadequacy of rural housing, and the slow progress of the Government's schemes. It was stated by several Peers that if more houses were available the labour shortage would be eased. LORD DE LA WARR declared that to increase production seriously, between 90,000 and 100,000 new houses would be needed. The slow rate of progress of the Government's building programme, the discouragement of private effort, the difficulty of obtaining licences to build houses for one's own workers, the endless number of permits and restrictions, the lack of any policy for reconditioning, were all of immense importance.

LORD QUIBELL said that the real difficulty was that of supplies. Timber and bricks were in short supply. It astounded him to think that brickyards being worked during the war were levied for the purpose of encouraging other brickyards which were not being worked to keep their plant and machinery in such a condition as to be able to operate whenever they might be required. All over the country there was a shortage of hollow clay bricks for partitions in houses. They had the clay and they had the brickyards, but scores of them were not yet working. That was a scandal, but one that could be easily remedied. Those who had been receiving the levy of 3s. per 1,000 ought to be told that it was their duty to keep their plants in such a condition that they could have provided a remedy for this hollow brick shortage. Electrical fittings, and baths and taps were all equally in short supply. Let the Government criticise the builder less, give him more encouragement and give him the materials. Then, if he did not produce the goods, deal with him! He was sure that the houses, either in the countryside or in the urban districts, would be provided if the Government gave the builder the material he wanted. He had both the men and the will to do the job.

THE EARL OF HUNTINGDON, replying for the Government, said that the latest figures, those for October 31, 1946, showed that in general the number of permanent houses in rural areas for which sites had been agreed, the numbers actually started and the numbers completed, compared not unfavourably with the respective numbers in urban areas. In figures, the total number of houses begun by local authorities or licensed to be built in rural areas was 38,838, and the number completed 7,216. It could be reasonably assumed that the bulk of the 38,838 would be completed in time for the harvest of 1947. They would be in addition to the 7,216 already completed. Hence the number of houses completed in the first two years of peace would exceed the average increase for the inter-war years, which was roughly 12,500. Quite apart from these houses built in rural areas by the rural district councils, it could be assumed that a reasonable proportion of houses built privately would go to agricultural workers. But he must point out that the rural building resources could not be wholly mobilised for house building without endangering essential work in the rebuilding or repairing of farm buildings.

Shortage of Putty.

In reply to LT.-COL. BROMLEY-DAVENPORT, MR. TOMLINSON said that there was, of course, a general shortage of putty due to the temporary world shortage of linseed oil, and it had not so far been possible to find a satisfactory substitute for linseed oil in putty. He had, however, taken steps to arrange for supplies for priority work.

Black-Market Offences.

MR. BAKER-WHITE asked the Minister of Works if he would state the number of builders convicted for black-market offences in the period July 1 to October 31, 1946, inclusive.

MR. TOMLINSON said that the number was 60.

MR. SPARKS asked the Minister of Works if he would call a conference of trade unions engaged in the building industry and employers' organisations with a view to the acceptance of measures of control which would stamp out black-market practices and fully mobilise the skill, labour and materials available behind the Government's housing programme.

MR. TOMLINSON said that he was already in consultation with the Trade Unions and Employers' Organisations through his National Consultative Council and he did not think that any useful purpose would be served by calling a special conference.

Non-Priority Work.

MR. GEOFFREY COOPER asked the Minister of Works from what sources the 324,000 building trade operatives, recently engaged on non-priority work and maintenance of houses, obtained their supplies of building materials.

MR. TOMLINSON said that the supply of certain materials was sufficient to enable manufacturers and merchants to meet other demands after the requirements of priority work had been met.

Licence Regulations.

MR. EDWARD DAVIES asked the Minister of Works how many cases of infringement of the Building Licence Regulations had been brought to the notice of his department during the past 12 months; and in how many cases court action had been taken.

MR. TOMLINSON said that 11,453 cases of suspected infringement had been brought to notice in the past 12 months; in only 147 of these cases was he advised that the evidence was sufficient for prosecution, and those cases were taken to Court.

Apprentices.

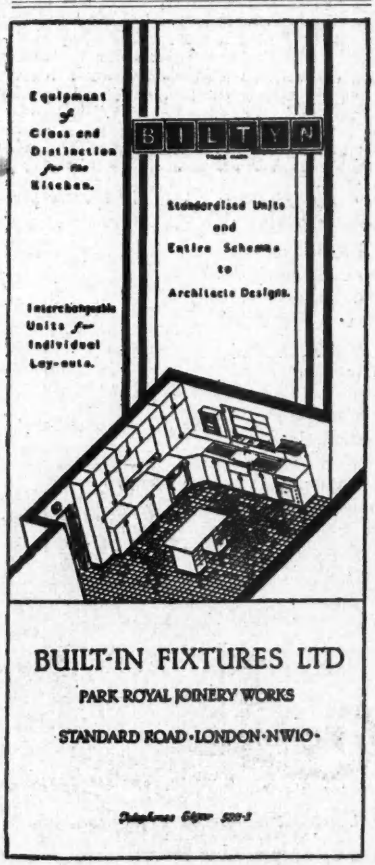
MR. H. D. HUGHES asked the Minister of Works how many apprentices in the building industry had been notified to the local Joint Apprenticeship Committees; how many of these had been registered; and if he was satisfied with the progress made in clearing up arrears of registration.

MR. TOMLINSON said that about 103,000 apprentices in the building industry had been notified to local and area Joint Apprenticeship Committees; and about 6,000 had been registered. He was disappointed that greater progress had not been made and he was taking up the matter with the industry.

London Workers.

MR. GIBSON asked the Minister of Works how many workers insured in the building and civil engineering trade there were in the London area; how many of these were employed on new building, including temporary houses, bomb damage repairs, rebuilding war-destroyed houses, conversions for family occupation, maintenance work, and foundations and sewer work for houses.

MR. TOMLINSON said it was estimated that there were 234,000 building and civil engineering operatives employed in the London area at the end of October. Of these about 33,000 were engaged on new house building (including temporary houses and the rebuilding of war destroyed houses), 93,000 on war-damage repairs to houses, 11,000 on conversions for family occupation, 19,000 on maintenance of houses, and 2,000 on housing site preparation.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BUILDERS' CONFERENCE IN LONDON

REPRESENTATIVES of builders' associations and federations from an area covering the Wash to Bognor were present at a conference organised in London on December 2 by the South-East and East England Area of the British Electrical Development Association.

Mr. G. P. Dixon (Colchester Borough Electrical Engineer), who is chairman of the S.E. and E. England (Eastern) Committee, took the chair, supported by Mr. J. R. Jones and Mr. G. M. Daniels.

In his opening address THE CHAIRMAN said the Government wanted four million houses in a hurry. When people were in a hurry they were apt to overlook something. It was imperative and vitally necessary that a service of electricity should be provided in every house, in every shop, and in every new factory. No house built as a home for the young men and women of to-day would meet with acceptance unless it were fully provided with all the outlets for an adequate service of electricity in every room.

It had been a common mistake in the past to fail to plan the use of electricity as part and parcel of the structure, leading to much subsequent cutting away, extra cost, and inconvenience to occupiers. There was need to leave ample room in a recess for the service apparatus. E. D. A. had already done its part by planning a compact and simplified service unit, which was now in mass production and which would do away with the unsightly conglomeration of meters, main switches and fuses, much too frequently seen in the past. All they wanted now was a decent recess in which this nerve-centre of the home could be accommodated tidily and suitably.

The importance of making adequate use of what was already known and already available was stressed by MR. A. L. OSBORNE, F.R.I.B.A., London, in a paper on "The Influence of Electricity on Building Design and Construction." It was no good budgeting for fittings, apparatus, etc., with a delivery of anything from one to two years ahead. It was necessary to ensure that an adequate supply of electricity was available before planning a new housing site. Consultations with architects and authorities concerned would often result in "massaging until the various parts slip into place." The amount of cable necessary to service a lot of houses and buildings was a very serious item. Builders should consult electricity supply undertakings on the question of the ring-main system of wiring, which was a new development. Another important advance was the introduction of the 13A fused plug. An adequate installation should be insisted on from the beginning.

Much could be done to improve thermal efficiency per house or factory by improved insulation—fuel consumption could be reduced by 10 to 40 per cent. in certain cases. Cost was not high, and it was well worth it.

Concluding, the speaker emphasised the importance of careful preparation of schemes before submission to the Ministry, in order to reduce the likelihood of economies being made at the expense of the electrical installation. Experience had shown that this was usually the first to suffer.

British Standards.

Now issued from 28, Victoria-street, S.W.1, are the following British Standard specifications: Manila ropes for general purposes (B.S. No. 431:1946) (2s. post free); and sisal rope for general purposes (B.S. No. 908:1946) (2s. post free).

NEWS ITEMS

Builders' Christmas Holiday.

The London Regional Joint Committee of the Building Industry announces that under the London Working Rule Agreement Christmas Day and Boxing Day are the recognised holidays, and works and jobs should be closed on those two days only.

Prices Current: Corrections.

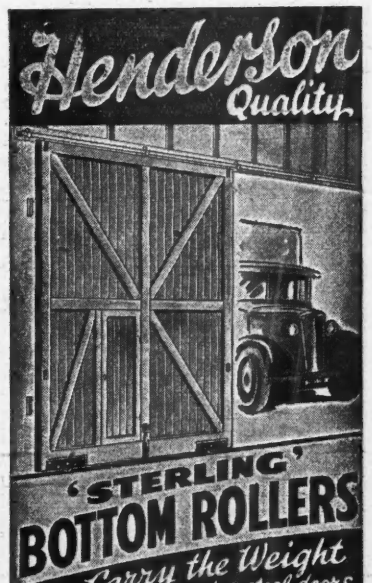
In our issue for December 6, under the heading "Cement," the price of "Aquacrete" was given as 29s. 6d. per ton on ordinary Blue Circle. This should be 31s. 6d. Under the "Snowcrete" prices the under 1 ton price was given as 13s. 2d. per cwt. This should be 13s. 4d.

An Amalgamation.

At the annual general meeting of the British Employers' Confederation and the special general meeting of the Federation of British Industries held last week, resolutions were adopted agreeing in principle to the two organisations being merged into one body with one council and president and staff, and it was decided to prepare a scheme of amalgamation for submission to the members of the two organisations.

New Underground Station.

A new underground station is being built at Wood-lane. When it is completed (by next autumn, it is hoped), passengers will use a new three-platform station with its entrance just opposite White City Stadium. A subway ensuring dry access to the stadium in all weathers is also to be built. Concrete blocks will be largely used in the construction so as to avoid competing for materials required in the housing programme. The new station is situated on Wood-lane, slightly north of the existing station, and although the scheme involves new layout of tracks and work on and around the running lines, train services will not be interfered with. The new station will be a focal point for the staff operating the 51¼ miles of the Central line, when the eastern and western extensions are completed. A new canteen and a staff institute are included in the design of the station block.



Committee on Gravel Problems.

The Minister of Town and Country planning has appointed a committee under the chairmanship of Mr. A. H. S. Waters, V.C., M.Inst.C.E., to make recommendations on future policy for the control under the Town and Country Planning Acts of the extraction of sand and gravel, with particular regard to the need for maintaining adequate sand and gravel supplies at reasonable cost and the need for ensuring that the necessary disturbance to agricultural land is reduced to a minimum and confined as far as possible to land of less agricultural value.

Town Plan Summaries.

The Minister of Town and Country Planning, the Rt. Hon. Lewis Silkin, M.P., attended the Town and Country Planning Association's headquarters at 28, King-street, W.C.2, on Thursday, December 12, when Messrs. Ascot Gas Water Heaters, Ltd., introduced their new "Town Plan Summaries," a useful file of summaries of the schemes prepared by various towns and cities throughout the country. Mr. Silkin, who was introduced by the Earl of Limerick, welcomed the publication as one helping to keep in front of the general public the fact that these plans and schemes do exist, thus making it more likely that local authorities would be stirred to action. Mr. Clough Williams-Ellis, M.C., F.R.I.B.A., also spoke.

TRADE NEWS

A Christmas Magazine.

The Christmas, 1946, number of "600," the bright magazine of the group of companies of Messrs. George Cohen, Sons and Co., Ltd., has just come to hand. Gaily illustrated and humorously written, it is a credit to all connected with its production. Appropriately, the foreword welcomes back employees released from the various Services in which more than 1,500 enlisted.

A Social and Dance.

The Sports Club of the Trussed Concrete Steel Co., Ltd., of 6 and 7, Collingham-gardens, Earl's Court, London, S.W.5, held a successful social and dance on December 7 at the Victoria Hall, Bloomsbury-square, when 300 members and guests were present. Many prizes were awarded for novelty events, and light refreshments were served throughout the evening.

An Illustrated War Record.

An attractive little booklet recording the war service and activities of Messrs. Gent and Co., Ltd., manufacturing electrical engineers, Faraday Works, Leicester, has recently been issued. The booklet, which is fully illustrated, describes the 100 per cent. change to war production in 1939 and records the firm's pride in being entrusted with the design, development and production of a wide variety of intricate components and instruments used by the armed Forces.

OFFICIAL NOTIFICATION

Withdrawal of Building and Civil Engineering Industries from scope of Essential Work Orders.

The Ministry of Labour and National Service has recently informed organisations representing employers and workers concerned that the building and civil engineering industries will be withdrawn from the scope of the Essential Work Orders about March 31 next.

Notices will be issued to all scheduled undertakings and sites, giving them at least a month's notice. Until individual descheduling takes effect, the provisions of the Essential Work Orders remain in force for all employers and workers on scheduled sites and in scheduled undertakings.

THE SCOTTISH BUILDER

NEW BUILDINGS

Dumbartonshire.—Plans in hand for additions to the factory at Bulldale-st., Yorker, for Drysdale & Co., Ltd., for which the principal contractors are the Clyde Structural Iron Co., Ltd., Scotstoun.

Glasgow.—Workshop to be erected by Hugh McWhinnie & Sons, 1361, Duke-st., at Corston-st.

Glasgow.—Paint store and staff accommodation proposed at Barrowfield-st., for Alliance Industries, Ltd., for which the architects and surveyors are James Davidson & Son, 6, Academy-st., Coatbridge.

Glasgow.—Alterations and additions proposed for J. & D. Hamilton & Dwart, for which the architects are Frank Burnet & Boston, 180, Hope-st., Glasgow.

FUTURE CONSTRUCTION

CONTRACTS OPEN

For some contracts still open but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

DECEMBER 24.

†***Bromley T.C.**—Conversion of "Wintmoor," 5, Oldfield-rd., and "Redlands," 35, Chislehurst-rd., into flats. B.E. Dep. £2 2s.

DECEMBER 27.

†**Clare R.D.C.**—6 pairs of Airey houses and site works. Hunt and Coates, 84, Guildhall-st., Bury.

†**Clare R.D.C.**—38 houses in various parishes. Hunt and Coates, 84, Guildhall-st., Bury St. Edmunds. Dep. £3 3s.

†***Mablethorpe and Sutton U.D.C.**—Boating pool and reinforced concrete colonnade with lavatory blocks. R. Vincent Lewis, C.

†***Mablethorpe and Sutton U.D.C.**—16 houses at Cade Field, Sutton-on-Sea, and seven houses at Byron-rd., Mablethorpe. C. Dep. £2 2s. Tenders by January 7.

DECEMBER 30.

†***St. Albans R.D.C.**—13 houses off Hatfield-rd., Marford, Wheathampstead. C. Dep. £2 2s.

Worksop R.D.C.—22 houses at Bawtry-rd., Harworth. B. D. Thompson (F.), 83, Bridge-st., Worksop. Dep. £3 3s.

JANUARY 1.

***Salop C.C.**—Four classroom blocks with ancillary buildings at Shifnal North Secondary School. A. G. Chant, County A., 5, Belmont, Shrewsbury.

JANUARY 6.

†***Hammersmith B.C.**—(a) 105 flats and laundry at junction of Dalling-rd. and Floragdns.; (b) 107 flats and laundry at Becklow-rd.; (c) 35 flats and laundry at junction of Askew-rd. and Goldhawk-rd. B.E. & S. Dep. £2 2s. each set.

Newtown and Llanidloes R.D.C.—12 houses at Llandinam. Walter B. Bond, F.S.I., Colmore-chbrs., 3, Newhall-st., Birmingham 3. Dep. £2 2s.

Welwyn R.D.C.—Public convenience at North-st. S.

JANUARY 8.

Bath T.C.—36 dwellings at Tiverton estate, site No. 1. City E. Dep. £2 2s.

JANUARY 10.

***Lindsey (Lincoln) C.C.**—Three pairs of police houses and office at Beemham-rd., Scunthorpe. A. R. Clark (A.), Acting County A.

JANUARY 11.

Newmarket R.D.C.—114 Airey houses at 8 sites. L. I. Cockerham, Chartered Architect, Council Offices.

JANUARY 13.

***Blackwell R.D.C.**—52 houses at Langwith Junction, Derbys. Architect and Housing Superintendent, "Dale Close," 100, Chesterfield-rd., South, Mansfield, Notts. Dep. £2 2s.

Cheshunt U.D.C.—3 houses at Hammond-street-rd. E. and S. Dep. £2 2s.

***Weymouth and Melcombe Regis T.C.**—15 houses and 16 flats off Benville-rd. B.E. and S. Dep. £2 2s.

JANUARY 14.

Bray (Eire) U.D.C.—78 dwellings. Town Hall. Dep. £10 10s.

†***Mortlake Crematorium Board.**—Extension and alteration at Mortlake Crematorium. F. Douglas Barton, M.Inst.M. & Cy.E., Mortlake Crematorium Board, Town Hall, Hammersmith, W.6. Dep. £2 2s.

***Norfolk E.C.**—Erection of classroom and alterations and additions to offices at Sprouston Modern Secondary School. F. G. Limmer (F.), Ed. Architect. Dep. £2 2s.

Stepney B.C.—333 flats and 52 houses at Bancroft-rd. housing scheme, Contract No. 648. B. W. Stuttle (F.), M.Inst.M. & C.E., B.E. & S. Dep. £20.

JANUARY 15.

***Alton R.D.C.**—48 Airey houses at six sites. C. Dep. £3 3s.

Essex C.C.—(1) Alterations and redecorations at Youth Centre, Old Rectory, Wicken Bonhunt, nr. Newport; (2) dining-room and kitchen hutments at Youth Centre, Felstead County Primary School; (3) additional lavatory accommodation at Hornchurch North-st. County Primary School. County A.

JANUARY 18.

Melksham U.D.C.—38 houses. D. H. McKerchar, A.M.Inst.C.E., E., S. and Architect, Town Hall. Dep. £2 2s.

Wolverhampton C.B.—Three prefabricated huts on site of Evening Institute, Walsall-st. A. C. H. Stillman (F.), County Ed. Offices, Earl-st., Stafford. Dep. £2 2s.

JANUARY 19.

Chorley R.D.C.—20 houses at two sites. W. Groves. Dep. £2 2s.

JANUARY 20.

***Harrow U.D.C.**—18 houses at Woodlands estate, Stanmore. E. and S. Dep. £2 2s.

***Lowestoft T.C.**—116 houses at No. 1 housing site, Yarmouth-rd. B.E. Dep. £2 2s.

JANUARY 22.

Hackney B.C.—88 dwellings at Shacklewell-rd., No. 1 contract. B.E. and S. and Director of Housing Development, Town Hall. Dep. £2 2s.

JANUARY 23.

Worcester T.C.—10 houses, Ronkswood, Newtown-rd. No. 1 estate, Worcester. City E., 22, Bridge-st. Dep. £5 5s.

FEBRUARY 7.

***Sherborne U.D.C.**—24 dwellings and conversion of existing building at Horsecastles. T. W. Sharpe (L.), Council Offices, South-st. Dep. £5.

NO DATE.

Bredbury and Romiley U.D.C.—100 houses. C. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

JANUARY 11.

Dorset C.C.—County S.

JANUARY 15.

Goole T.C.—B.E.

JANUARY 18.

East Suffolk C.C.—County S.

ROADS, SEWERAGE AND WATER WORKS

DECEMBER 30.

†***Epping R.D.C.**—Roads and sewers at Nazeing. Tooley & Foster, Midland Bank-chbrs., Buckhurst Hill, Essex. Dep. £2 2s.

DECEMBER 31.

***Longdendale U.D.C.**—Roads and sewers, paths and water mains at Hollingworth site.

The Hall Mark AYGEE *of Craftsmanship*

AYGEE LIMITED

have pleasure in announcing a large extension to their Leaded Light Dept., and can now offer

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W. Dobson Chapman & Partners, Jordangate, Macclesfield.

JANUARY 7.

Llwyn R.D.C.—Sewerage and sewage disposal works at Chwilog, nr. Pwllheli. Richards and Dumbleton, engineers, Cornwall-bldgs., 45, Newhall-st., Birmingham, 3.

JANUARY 8.

Birmingham T.C.—Construction of approx. 6,150 lin. yds. of brick and concrete stoneware pipe and concrete tube foul and surface water sewers, etc., at Bartley Green. City E. Dep. £2 2s.

Gloucester T.C.—Reconstruction of St. Oswald's-rd. and Estcourt-rd. City S. and Water E. Dep. £3 3s.

Pembroke R.D.C.—Preparation of site at Penally. J. Owen Parry and Lewis, Arcade-chbrs., Ammanford. Dep. £3 3s.

JANUARY 9.

Oundle and Thrapston R.D.C.—Roads and sewers in 4 parishes. Pick, Everard, Keay and Gimson, Engineers, 6, Millstone-la., Leicester. Dep. £2 2s.

JANUARY 10.

Westmorland C.C.—Tar and bitumen spraying of roads. County S.

JANUARY 13.

Belfast City and District Water Commissioners.—Construction of aqueduct, 53 in. internal dia. and approximately 4½ miles in length. Secretary, Water Office. Dep. £10.

Neyland U.D.C.—Sewers, manholes, etc. A. P. I. Cotterell and Son, engineers, 24, Victoria-st., Westminster, S.W.1. Dep. £3 3s.

Winchester R.D.C.—Construction and maintenance of approx. 11 miles of cast-iron and stoneware pipe sewers, etc. Lemon and Blizard, Lansdowne House, Castle-la., Southampton. Dep. £5 5s.

JANUARY 15.

Stoke-on-Trent T.C.—Culverting of Brook courses. City E. Dep. £3 (Treasury notes).

JANUARY 22.

***Caterham and Warlingham U.D.C.**—Roads and sewers at site No. 6, Slines Oak-rd., Woldingham. E. & S. Dep. £2 2s.

JANUARY 23.

Worcester T.C.—Roads and sewers at Ronkswood estate No. 2. City E. Dep. £5 5s.

JANUARY 24.

***Kent C.C.**—Tarpaving. County A.

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the advertisement pages of this and previous issues.

GENERAL BUILDING WORK

(LONDON)

Battersea. — HOUSING. — L.C.C. propose to acquire a 44.5-acre site in the Patmore-st. area, in the boroughs of Battersea, Lambeth and Wandsworth for residential redevelopment.

Bermondsey.—HOUSING.—The Housing Committee of the L.C.C. have approved a tentative scheme submitted by Mr. Frank Scarlett for the development of the Oxley-st. area. The scheme provides for the erection of two blocks of dwellings comprising 76 flats.

Camberwell.—HOUSING.—The L.C.C. Housing Committee have approved a tentative scheme submitted by Mr. Percy V. Burnett, the appointed architect, for the development of the Radnor-st. site. It is intended to erect 107 flats at an estimated cost of £169,000.

Greenwich.—SCHOOL EXTENSION.—L.C.C. are considering the possibility of securing additional land for a new comprehensive high school on the enlarged site of Creek-rd. school and propose to acquire a vacant site to the south of the school for the erection of a kitchen and dining unit.

Hackney.—HOUSING.—The B.C. propose to erect 12 houses, 34 maisonettes and 88 flats on the Forest-rd. site at an estimated cost of £170,000. Plans have been prepared by the Borough Engineer and Surveyor.

Hackney.—HOUSING.—B.C. propose 18 houses, 16 maisonettes and 16 flats on Warwick-gr. (south side) site at an estimated cost of £79,500. Plans have been prepared by the B.E. and S.

Hackney.—HOUSING.—Tenders are shortly to be invited by the B.C. for the erection of 88 houses in Shacklewell-rd.

Hackney.—LAUNDRY EXTENSIONS.—B.C. propose extensions to mechanical laundry at Eastway at an estimated cost of £2,000.

Hammersmith.—DAIRY ALTERATIONS.—United Dairies, Ltd., propose extension to loading dock and internal alterations at United Dairies Depot, Scrubs-la., N.W.10.

Hammersmith.—OFFICES.—B.C. have raised no objection to an application by W. S. Grice to erect a new block of offices and living quarters at north end of Richford-st., W.6.

Hendon.—BUILDING APPLICATIONS.—The following building applications have been approved by the Buildings and Town Planning Committee: T. Mortimer Burrows and Partners—rebuilding of four flats, Quadrant-close, N.W.4, for the West London Property Corporation, Ltd.; Mrs. L. Day—four houses with garages,

Wise-la., Mill Hill, N.W.7; Messrs. Clutton, 5, Great College-st., S.W.1—rebuilding four houses, 97-103, Hendon-way, N.W.2, for the Ecclesiastical Commissioners; The Northmet Power Co., Ltd.—erection of sub-station building, Woodcote-av., Mill Hill.

Hendon.—FLATS.—Plans have been prepared for 28 flats at Edgeworth-close by The Coombs Construction Co., Ltd., on behalf of the T.C.

Hendon.—FLATS.—The T.C. have been asked to approve an application made on behalf of Messrs. C. W. B. Simmonds, Ltd., 75, Shoot-up-hill, N.W.2, to erect a block of flats on land at the junction of Victoria-rd. and Brent-st.

Hendon.—HEALTH CENTRES.—The Borough Engineer and Surveyor and the Medical Officer of Health have been instructed to present to the next meeting of the Public Health Committee plans and estimates for the extension of the Childs Hill and West Hendon Health Centres.

Islington.—HOUSING.—A scheme has been approved by the Housing Committee of the L.C.C. for the development of a 6-acre site in Hilldrop-rd. It is intended to erect three four-storey and six five-storey blocks of flats.

Lambeth.—HOUSING.—The B.C. propose to erect 46 permanent pre-fabricated houses of the Wates type on the Elder-rd. housing site and have applied to the L.C.C. for sanction to the borrowing of £71,473.

Southwark.—TRAFFIC ROUNDABOUT.—Proposals to rebuild the shopping centre around a three-tier roundabout at Elephant and Castle have been disclosed by Mr. E. Hardy, Borough Engineer, to the B.C.

Tooting.—HOUSING.—Mr. Donald Hamilton, 30, Portland-pl., W.1, is to be retained by the B.C. as architect for the development of the Renmuir-st. housing site.

Wandsworth.—HOUSING.—L.C.C. propose to acquire the following sites for housing purposes: Three sites fronting Thrale-rd. and Fayland-av., Streatham (4½ acres); two sites in Atkins-rd. and Weir-rd., Clapham (5¾ acres); two sites in Alton-rd. and Bessborough-rd. (4½ acres); a small site in Westleigh-av. as an extension to the 61-acre site in Putney Park-la., which the L.C.C. has already announced their intention to acquire.

Wandsworth.—HOUSING.—The B.C. have been granted sanction by the L.C.C. to borrow £140,186 for the erection of 88 permanent pre-fabricated houses on nine sites in the borough.

(PROVINCIAL)

Ashton-under-Lyne.—T.C. propose day nurseries, welfare centre and clinics at junction of Brassey-st. and Alexandra-rd., and at corner of Canterbury-rd. and Junction-st., at £17,500.

Bath.—M.H. approved erection of 286 houses at Tiverton site No. 1, for T.C.

Bexhill-on-Sea.—T.C. to undertake repairs at De La Warr pavilion, at £6,200.

Broughton, Lancs.—C.E. authorities propose secondary (modern) school.

Chesterfield.—R.D.C. propose 100 "Wates" houses and 100 "Dyke" houses, also development of 60 acres of land at Ducksett-la. and Hornthorpe-rd., Eckington for 500 houses.

Chorley.—Board of Governors of Chorley Grammar school propose new buildings.

Coventry.—Boy Scouts' Association propose headquarters, at £20,000.

Daventry.—R.D.C. propose houses on 22-acre site at Woodford Halse.

Denton.—U.D.C. propose public baths scheme.

Droylsden.—U.D.C. propose public baths.

Essex.—Works for C.C.: Sketch plans approved for three additional classrooms at Ilford Mayfield Secondary Girls' school, at £8,000.

Fence Houses.—Mauchlen & Weightman, 12, Saville-row, Newcastle-on-Tyne, are architects for factories for North-Eastern Trading Estates, Ltd., Low Fell, Gateshead.

Golborne.—U.D.C. approved 80 houses and 10 bungalows for aged persons at Derby-rd. site.

Holme, Lancs.—P.C. propose parish hall, at £10,000.

Houghton-le-Spring.—North-Eastern Trading Estates, Ltd., Low Fell, Gateshead, to erect factories at Dubmire trading estate.

Jarrow.—Housing Committee to erect further 146 houses at Bilton Hall estate, at £165,955. Plans by H. W. T. Perkins, B.E.

Kearsley.—Lancs E.C. propose school canteen at Lord-st.

Lancaster.—Licensing Justices approved: Structural alterations at "Sun" Inn; "White Lion" hotel; "Crown" hotel; and the "Golden Bull" hotel; for Yates & Jackson, brewers, 8, Brook-st.—E.C. propose junior and infants' school at Newlands.

Langwith Junction.—L.N.E.R. propose locomotive depot, at £254,000.

Manchester.—E.C. propose primary school for junior and infants at Cross Acres, Wythenshawe.—T.C. approved: Extensions to works, Fitzgeorge-st., Collyhurst, for Tenson Electric Co. (1935), Ltd.; additions to works, Lawn-st., Lilley-st., and Peter-st., Collyhurst, for Elliott & Crabtree, Ltd.; additions at Rochdale-rd., Blackley, for Blackley Co-operative Society, Ltd., Market-st., Blackley; additions to factory at Westgate-st., Blackley, for F. Trew; dining-room and kitchen, St. Cuthbert's R.C. school, Heyscroft-rd., Withington; dining-room and kitchen, Beaver-rd. Municipal school, Beaver-rd., Didsbury, for E.C.—T.C. propose swimming baths at Cheetham Hill-rd., Cheetham, nr. Woodlands-rd.

Mansfield.—Notts E.C. propose extensions at Pleasley Hill schools and dining-room at St. Phillip's school, Westfield-la.

Market Harborough.—U.D.C. redevelopment scheme for Cattle Market, at £12,000.

Newcastle, Staffs.—T.C. approved: Ice cream factory at Dunkirk, Chesterton, for Cotton, Son & Richards; agricultural implement works, Friars-st. and Goose-st., for F. H. Burgess, Ltd. Scrivener & Sons, 4, Wellesley-st., Shelton, are architects for licensed premises at junction of Clayton-rd. and Seabridge-la.—E.C. propose kitchen and dining-room at Ellison-st. Junior and Infants' school.

New Mills.—U.D.C. approved automatic telephone exchange, for M.O.W.

Redditch.—Worcs. E.C. propose grammar school and three modern schools.

Rotherham.—T.C. approved: Works at Henry-st., for Hy. Garnett & Co., Ltd.; works at Grange Mill-la., for G. Dodd.

South Shields.—Woolworths, Ltd., King-st., are to rebuild stores.

Stalybridge.—Stalybridge, Hyde, Mossley & Dukinfield Joint Transport and Electricity Board, Tame Valley, propose garage and workshop.

Sunderland.—North-Eastern Trading Estates, Ltd., Low Fell, Gateshead, to extend the Pallion trading estate. Plans by W. & T. R. Milburn, 17, Fawcett-st., Sunderland.

West Hartlepool.—E.C.'s development plan includes 11 primary schools and conversion of five existing schools.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Amlwch.—38 houses at Pen-y-Cefn estate, for U.D.C. J. Moss, P.A.S.I., Midland Bank-chbrs., High-st., Bangor, N. Wales: *Parry Bros., Gas Works Yard, Llangefni, Anglesey.

Armagh.—60 houses at Lisanally-la., for U.D.C. R. H. & G. P. Bell & R. F. Malcolmson, Belfast & Lurgan, architects. Surveyor: P. J. Byrne, B.E., City Hall, S. Quantities by W. R. Wheelan, A.A.B.S.S., Lurgan: *F. O'Hare & Co., Ltd., Newry, Co. Down, £109,798.

Banbridge (Co. Down).—Four cottages, for R.D.C.: *Samuel Finney, Ltd., Banbridge, £2,437 per pair.

Banstead.—Houses for U.D.C.: 10 at Sandland-rd., Walton-on-the-Hill: *Burles (Builders), Ltd., Rosehill-ct., St. Helier-av., Morden, £12,050; six at Tangier-way site: *G. W. Harrison, Ltd.; four at Tangier-way and Tattenham-way: *Sinton Bros.; three at Tattenham-way: *A. E. Turner, Lower Kingswood.

Bath.—Rebuilding 11, 20-24, Thornbank-pl., for City Council: *The Building Industry of Bath, Bath, £8,518.

Belper.—38 houses at Woodlands-rd., Allestree, for R.D.C.: *Vic Hallam, Ltd., Langley Mill, Nottingham, £1,236 each.

Boston.—12 Swedish timber houses at Lowgate, Bicker, for R.D.C.: *S. Favell & Sons, Kirton, Boston, Lincs, £10,600.

Brampton (Cumberland).—50 houses at Cotehill, for Brampton Public Utility Society. Architects: Graham & Roy, 6, Paternoster-row, Carlisle: *James Millar & Sons, 15, London-rd., Carlisle.

Braughing.—28 houses at Much Hadham, for R.D.C.: †G. L. Thurgood (1933), Ltd., Much Hadham, Braughing, £39,805 (negotiated price).

Calne.—42 houses at Abberd site, for T.C.: *Calne Associated Builders, £50,856.

Castleford.—Foundations and auxiliary work for 50 Howard houses at Redhill (No. 2) scheme, for U.D.C. John R. Abell, M.Inst.M. & Cy.E., E. & S.: *Harlow & Milner, Ltd., 10, Corporation-st., Dewsbury, £7,580.

Consett.—12 aged persons homes at Medomsley, for U.D.C.: *C. T. C. (Builders), Ltd., Blackhill.

Darlington.—Tyre depot, Barton-st., for Olivers (Newcastle), Ltd. Architect: M. A. Mackenzie, Mawson's-bldgs., Mosley-st., Newcastle-on-Tyne: *Dunn and Dunwell, Arden-st., Darlington.

Derby.—Dining-room and kitchen at Alvaston County school, for E.C. C. H. Aslin (F.), Boro' A.: *Ford & Weston, Ltd., Osmaston-rd., Derby.

Doncaster.—12 houses at Edlington-la., Edlington, and nine at Scawsley-la., for R.D.C.: *Marshall & Willey, Ltd., and C. & G. Barber (subject to M.H. approval).

Doncaster.—Factory at Whatley Hill-rd., for G. B. Kalee, Ltd.: *A. T. Rowley (London), Ltd., 339, Lordship-la., Wood Green, London, N.17.

Dorking and Horley.—12 houses at Horleygdns. estate, for R.D.C.: *Bishop and Clarke, £16,389.

Dudley.—52 houses at Tansley Hill, for T.C.: *Wm. Linndley, Ltd., Flood-st., Dudley, £58,240.

Dudley.—Kitchen and dining-room at Halesowen-rd. school, for E.C. F. H. Gibbons, B.S.: *William Cooper & Sons (Builders), Ltd., West-st., Blackheath, Birmingham.

Dungannon, Co. Tyrone.—42 houses at Moygashel, for R.D.C.: *Benson Bros., Cookstown, £59,476.

Essex.—Works for C.C. Execution of Work No. 7 at High-st., Wanstead, and completion of pedestrian subway under railway at Eagle-la., Wanstead: *John Cochrane & Sons, Ltd., £57,154 (subject to M.T. approval); conversion of Red House, London-rd., Chelmsford, into nurses' home: *W. E. Wiseby & Son, Chelmsford, £2,585 (subject to necessary consents).

Golborne.—10 bungalows for aged persons at Derby-rd. site, for U.D.C. A. Clough, S.: *Direct Labour Dept.

Gt. Yarmouth.—Houses at Magdalen College estate, Gorleston, for T.C.: First section, *H. A. Holmes & Sons, Ltd., Bath Hill-terr., Gt. Yarmouth; *Comben & Wakeling, Ltd., and J. Cooper (total cost, £81,989). Third section, *H. A. Holmes & Sons, Ltd., £35,189 (subject to M.H. approval).

Greenwich.—24 flats at Charlton-rd. C. H. Jennings, M.Eng., M.I.C.E., B.E. & S.: *Cox Bros., 39, Green-la., Ilford, £21,921.

Hackney.—100 flats at Banister House estate for B.C.: *H. J. Walker & Sons, Station-rd., Fishponds, Bristol, £169,570.

Hindley.—Factory at Hindley Green, for Turner & Newall, Ltd., Spotland, Rochdale. G. Grenfell Baines & Partners (A.), Architects, 12-24, Guildhall-st., Preston: *J. Gerrard & Sons, Ltd., Pendlebury-rd., Swinton, Manchester.

Horsforth.—Eight additional houses, type U1 extensions of existing contract on Derby-la. estate, for U.D.C. J. Newton Bell, Surveyor, Horsforth Hall: *Thomas Throup & Sons, Ltd., Cragg Hill, Horsforth, nr. Leeds.

Isle of Wight.—Additions at Sandown Secondary school for C.C.: *L. A. Moorman, Victoria-rd., Sandown, I.O.W., £3,156.

Jarrow.—Factories at Bede estate for Sharp's Footwear Repairs, South Shields, and Steel and Co., mineral water manufacturers, South Shields. Architects, J. Walter Hanson & Son, 123, Pilgrim-st., Newcastle-on-Tyne: *G. Henderson, Boldon-la., East Boldon, Co. Durham.

Keith (Banffshire).—Work in various trades for 14 houses at South Cuthil site. John Murdoch, architect. Mason work, *J. Brown, Hilton, Inverness; carpenter, *A. R. Cuthbert and R. M'Gregor, Keith, and R. Paterson, Newmills; plumber, *G. Laird, Keith; slater, *R. Dickie, Keith; plasterer, *Wm. Smith, Portgordon; painter, *P. Symon, Keith; electricians, *Munro and Halliday, Elgin (total cost, £15,038).

Kirkburton.—12 houses at Turnshaw's, for U.D.C.: *Elliot's Bricks, Ltd., £1,214 per house (subject to M.H. approval); conversion of brick huts into temporary dwellings, for U.D.C.: *G. T. Smith & Son, Park Grove, Birdsedge, £3,589 (subject to M.H. approval).

L.C.C.—Construction of roads and sewers and erection of 1,000 houses at Oxhey site, Watford, Herts: John Laing, Ltd., Mill Hill, £1,952,093; Richard Costain, Ltd., Westminster, £1,866,198; W. and C. French, Ltd., Buckhurst Hill, £1,834,360; M. J. Gleeson, Ltd., Cheam,

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Leyton.—Houses, for B.C. 18 at Montague-rd., *C. & A. Catchpole, Ltd., £23,016; 8 at Crownfield-rd., *H. C. Horswill, Ltd., £10,483; 8 at Hainault-rd., *J. and J. Dean, Ltd., £10,483 (subject to M.H. approval).

London (Admiralty).—Portsmouth: Resurfacing R.N. Barracks, roads, etc., A. G. Saunders, Ltd., 51, Belmont-rd., Southampton.

London (War Dept.).—Works contracts placed by War Dept. for week ended December 7: Selby, Yorks, miscellaneous work, W. Birch & Sons, Ltd., York.

Malvern.—68 houses at Church-rd. site, for U.D.C. C. C. Judson, B.Sc., A.M.I.C.E., S. and Water E.: *M. Wilesmith & Son, Malvern Link.

Ongar. — 30 Airey houses at Millbank-ave., Fairfield estate, for R.D.C. Raymond L. Luck, P.A.S.I., E. and S.: Group A, *Parsons Bros. & Jennings, 314, High-rd., Tottenham, £21,742; Group B, *Dicker Bros., Ongar, Essex, £12,797; Group C, *Roast E.G., Stondon Massey, £13,002.

Penistone.—66 Airey houses, for R.D.C.: *Ruddock & Merghan, Silkstone (approved by M.H.).

Preston.—Dining-room, kitchen and boiler-house at Preston Grammar school, for E.C. Granville Berry, Boro' Engineer: *J. B. Hill, £4,628.

Scunthorpe.—20 houses, Fulneck-rd. and 12 houses Portman-rd., for T.C. Walter Farrar, Boro' Surveyor. 12 houses, Fulneck-rd.: *Dunn & Sons, £14,160; eight houses, Fulneck-rd.: *S. G. Everett, £9,352; 12 houses, Portman-rd.: *Lonsdale Bros., £14,160 (all of Scunthorpe).

Skipton.—Dining-rooms and kitchens at Boys' Grammar school and at the Girls' High school, for E.C.: *E. Gadie, Ltd., Dale-chbrs., Kirkgate, Bradford.

St. Helens.—Buildings for Sacred Heart R.C. School, for E.C.: *Kearsley & Gee, Ltd., Heath-rd. Saw Mills, Ashton-in-Makerfield, nr. Wigan.

South Shields.—Houses, for T.C. John Reid, B.E.: *Henderson Bros., Smith-st., Tyne Dock (50); *R. Summerbell & Son, Rutland-st., South Shields (50); *R. Brown & Sons, Lord-st., South Shields (16); *G. Thornton & Son, Porchester-st., South Shields; 152 "Cussins" houses, *G. Bailey & Son, King-st., South Shields.

Sowerby Bridge.—50 houses at Sowerby estate, for U.D.C.: *H. H. Brook, Sowerby Bridge, £49,547.

Spalding.—Airey houses at 2 sites. F. Bernard Saunders, A.I.A.A., architect, 10, The Crescent, Spalding, Lincs.: 15 pairs at Cowbit, *S. Hale & Son, Ltd., 41, Pennygate, Spalding, £46,911; 3 pairs at Weston, *A. Coley & Son, 23, Alert-st., Crowland, nr. Peterborough, £9,091.

Stockton-on-Tees. — Provision of housing accommodation at Portrack gunsite camp, for T.C.: *Coultas & Shaw, Thornaby-on-Tees.

Sunderland.—Two factories at Pallion estate for North-Eastern Trading Estates, Ltd., Low Fell, Gateshead. Architects, W. and T. R. Milburn, 17, Fawcett-st., Sunderland: *R. G. Finlay, Ltd., West Sunniside, Sunderland.

Wellingborough.—16 houses for U.D.C.: *R. Brown & Sons, Ltd., Castle-st., Wellingborough (2 pairs): *C. Adams & Sons, Finedon-rd., Wellingborough (12), £13,939.

Wallsend.—20 houses at Sunnholme estate: *W. C. Leech, 2, Clayton-st., Newcastle-on-Tyne.

Wallsend.—100 houses at Willington West Farm estate for T.C. G. N. Teasdale, B.E.: *John Armstrong & Co., 185, Kenton-rd., Gosforth, Newcastle-on-Tyne (in lieu of tender withdrawn).

West Hartlepool.—86 houses for T.C. A. Golding, Boro. A.: *C. M. Yuill, Ltd. (18); *John Proud, Ltd. (10); *J. Peel (4); *T. M. Stonehouse, Ltd. (10); *W. Pearson & Son (10); *T. A. Young (6); *W. W. Brazell (12); *F. M. Gibbons (12); *Watt Bros. (4) (all of West Hartlepool).

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